Independent Panel Report on a Provider's Programme Review

Provider	DBS
Programme(s) Reviewed	Higher Diploma in Science in Data Analytics Certificate in the Fundamentals of Data Analytics

Independent Panel Members

Name	Role	Affiliation
Colin McLean	Chair	Higher Education Inspector UAE, Former VP Academic Affairs and Registrar IT Sligo, Former Head of Faculty of Business and Humanities
Rachel Menzies	Subject Matter Expert	Senior Lecturer and Associate Professor in Computing, University of Dundee, former Director of Undergraduate Teaching for Computing
Christopher McLoughlin	Subject Matter Expert	Lecturer in Data Analysis, Quantitative Techniques, Business Analytics & Reporting, IT Sligo
Nigel McKelvey	Subject Matter Expert	Head of Flexible and Online Learning, Lecturer in Computing, Letterkenny IT
Mary Jennings	Report Writer	Independent Consultant
Loreno Waltero	Learner Representative	Student in CTC in Higher Diploma in Computer Science
Armin Saeb	Industry Representative	Speech Recognition Scientist, Soapbox Labs, Lecturer telecommunications

All members of the independent panel declared their independence of DBS and that they have no conflict of interest

1   Introduction

The scope of the review encompassed the Higher Diploma in Science in Data Analytics programme within DBS. The programme is placed at Level 8 of the National Framework of Qualification. The terms of reference below apply to the programme which is due for Programme Review in 2020.

2   Evaluation Process

2.1   Documents Supplied to the Panel

	Document Type	Document Name
1.	Review document	Programme Review Report, Higher Diploma in Computing and Certificated in Fundamentals of Data Analytics
2.	Programme document	Programme Document, Higher Diploma in Computing and Certificated in Fundamentals of Data Analytics
3.	Programme document	Module Document Higher Diploma in Computing and Certificated in Fundamentals of Data Analytics
4.	Supporting document	Appendix 2 CV of Staff of Programme
5.	Agenda for meeting	Agenda
6.	Information for Panel	DBS Role of Panel Members
7.	Information for Panel	QQI Role and Responsibilities and Code of Conduct for Reviewers and Evaluators
8.	Reference for Panel	QQI Templates
9.	Legal document	DBS Cover Letter, Declaration
10.	Legal document	DBS Deed of Guarantee
11.	Legal document	DBS PEL Refund Arrangement
12.	Supporting documentation	Attendance Data 2015-2018 Board of Studies minutes (most recent set) Enrolment Progression and Graduation Data and Analysis Exam Papers External Examiners Reports Learner Feedback Documents Information on DBS Library Programme Review 2015 Programme Team Meetings QQI Criteria and Handbook Sample Assessments Programme Handbook Blended Learning document Work placement manual
13.	Reference for Panel	Terms of Reference

2.2   Provider's Representatives Met

Session 1 DBS Senior Team

Andrew Conlan-Trant, Executive Dean

David Williams, Course Director

Maria Barry, Senior Lecturer

Kerry McCall Magan, Head of Academic Programmes

Tony Murphy, Head of Quality Enhancement and Innovation in Teaching and Learning

Shane Mooney, Head of Student Experience

Sarah Sharkey, Student Engagement Officer

Maria Barry, Senior Lecturer

Aenta Hamza Orlinska (note taker)

Session 2 DBS Programme Team

David Williams, Course Director

Maria Barry, Senior Lecturer

Kerry McCall Magan, Head of Academic Programmes

Tony Murphy, Head of Quality Enhancement and Innovation in Teaching and Learning

Sarah Sharkey, Student Engagement Officer

Tanya Balfe, Admissions Manager

Lori Johnston, Registrar

Aenta Hamza Orlinska (note taker)

Session 4 (HDip teaching staff)

David Williams, Course Director

Maria Barry, Lecturer

Sharham Azizi, Lecturer

Clive Gargan, Lecturer

Kunwar Madan, Lecturer

Achint Atri, Lecturer

Damien Kettle, Lecturer

Amir Esmaeily, Lecturer

Paul Laird, Lecturer

Rory O'Donnell, Lecturer

Shazia Afzal, Lecturer

Terri Hoare, Lecturer

Kerry McCall Magan, Head of Academic Programmes

Tony Murphy, Head of Quality Enhancement and Innovation in Teaching and Learning

Lori Johnston, Registrar

Aenta Hamza Orlinska (note taker)

Students (with students/graduates of BSc)

Higher Diploma

Ciaran Finnegan

Mark Slyman

2.3   Description of evaluation process

The panel noted that in the Review Document provided that a wide variety of external stakeholder has been consulted, including:

- **Employers**

Dublin Business School had conducted an ongoing and extensive engagement with employers and government agencies involved in the Irish information technology, consulting, financial and operations services, including software developers, IT service providers and integrators, professional services companies and government-related and independent bodies specialising in digital transformation domains:

  o   Techfindr
  o   Stelfox
  o   Mason Alexander
  o   ThinkHRX
  o   AIB
  o   *Accenture*
  o   Microsoft
  o   Capgemini
  o   AWS
  o   Carsireland
  o   Groupon
  o   Ergo
  o   Courtsdesk
  o   Google

- o   SAS
- **Professional Bodies**

  - o   Irish Computer Society
  - o   Leaders of Tech
  - o   AI Ireland
  - o   Cyber Ireland
  - o   Technology Ireland (https://www.technology-ireland.ie)

Internal Information

The panel noted in the programme review documentation that an analysis of the following had taken place as part of the process:

- Attrition, transfer and completion data by stage
- Assessment trends
- Exam board reports
- Feedback from teaching and support staff
- External Examiner Reports
- Student feedback surveys and data from Class Rep meetings
- Appeals and complaints data
- Attendance statistics
- Learner destination/graduate outcomes data
- Quality Assurance procedures and processes

External Information

The team had consulted a variety of professional and industry derived reports, legislation and government documents related to the professional area.

Programme Document/Modules Document

The panel reviewed the Programme Document and the Modules Document and reviewed the document supplied by DBS (listed above).

A review meeting was conducted by Zoom on 27th August, during which the panel met with representatives of DBS, including the programme team, learners and graduates and DBS senior management team.

The panel had prepared questions for discussion with DBS and a summary of the findings, recommendations and conditions made by the panel are set out in this document.

3   Panel Findings on Provider Programme Review Report

The following is the panel's commentary and recommendations on the provider's programme review report. It follows the section structure of the report in headings and in sequence. References to specific parts of the provider report will use the relevant report reference e.g. 2.2.4 Programme Management

3.1   Section 1 - Context and Terms of Reference for the Programme Review

Commentary:

The scope of the review encompassed the Higher Diploma in Science in Data Analytics programme within DBS. The programme is placed at Level 8 of the National Framework of Qualification. The terms of reference below apply to the programme which is due for Programme Review in 2020.

Programme approval is required from 1 September 2020.

The programme is due for review under the Quality and Qualifications Ireland (QQI) requirement for periodic monitoring and review, and also to conform with QQI policies published since the last validation of the programme, 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 2018*.

As detailed in QQI's *Core Statutory Quality Assurance (QA) Guidelines* (pp 11–12) and the *Programme Review Manual 2018*, 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.

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)?

In order to establish the above, the programme will be reviewed against the validation criteria, which includes appraisal and analysis of:

- Programme aims and objectives;
- The quality systems and processes in place to successfully deliver and monitor the programmes;
- The views of teaching staff, past and current learners, administrative staff servicing the programme, views of other staff that have any association with the programme or those involved with/on the programme;
- An analysis of the strengths and weaknesses of the programmes;
- The identification of potential opportunities and threats, together with the possible actions to be taken;
- An analysis of the success of the programme to date, learner registrations, student throughput, project cost savings, assessment results and completion rates;
- The current resources available for the delivery of the programmes;
- Feedback from all stakeholders including graduates, current learners, learners who have withdrawn from the programme, tutors, external examiners, administration staff and additional external stakeholders;
- Employment/advancement opportunities for learners;
- The teaching, assessment and learning strategy employed for the delivery of this suite of programmes;
- The assessment strategy for each individual programme;
- Research and relevant consultancy and project work undertaken by the programme team;
- Links with employers, industry, professions, the business and wider community;
- All programme content included in the programme(s).

The following will also be included in the Self-Evaluation Report:

- Draft programme schedules, incorporating the proposed changes;
- Detail of programme changes proposed and the rationale for same;
  Programme improvement plan.

Recommendations:

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3.2   Section 2 - Provider Information and Programme Context

Commentary:

Dublin Business School (DBS) is a private third-level institution and provider of higher education. It provides a broad range of full-time and part-time programmes at undergraduate and postgraduate level as well as professional and executive education.

In submitting a programme for validation or revalidation, it was stated that DBS fully considers the potential market for the programme, the size of previous intakes, where applicable, and its specific content, the competitive landscape, its own capacity to deliver such a programme and the fit of this programme with its own strategic intent. The programme presented for revalidation is part of DBS's suite of programmes in computing. There continues to be a demand for these type of programmes as evidenced by the feedback from employers and continued support government initiatives such as Springboard aimed at enabling learners to acquire new skills.

Recommendations:

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3.3 Section 3 - Baseline qualitative and quantitative information

Programme Data Overview

This section will include the panel's views on any or all of the following topics covered in the provider's review report: Applications, Enrolment, Attrition Transfer and Progression, Award Classification and Graduate Destinations

Commentary:

The panel found that the process for applications, enrolment, attrition, transfer and progression was clearly outlined and working in practice.

The panel noted that there was a high level of H1 award classification as well as a high level of pass grade, with fewer classifications being recorded in the middle of the spectrum. DBS indicated at the review meeting that this might be attributed to the small class sizes, and a high level of engagement by learners.

Recommendations:

Programme Delivery and Teaching & Learning Strategies

This section will include the panel's views on any or all of the following topics covered in the provider's review report: Physical Facilities and Resources, Timetabling, Learner Workload, Attendance, Teacher Learner Ratios, Community of Practice Learning, Teaching and Learning Strategies, Learning Outcomes achieved, Assessment Strategies.

Commentary:

In reviewing the documentation supplied, the panel noted that the programme team had undertaken a thorough review of the delivery and teaching & learning strategies. The teacher learner ratios are satisfactory, the panel found. The learning outcomes were generally clear but the panel has made some recommendations on minor adjustments to the wording of some of these. See Criterion 5 below.

The panel noted that, in relation to assessment strategies, it had been agreed by the team, based on feedback from learners and external examiners that it would be appropriate to have less assessment as the review indicated that there had been over-assessment in the programme under review. The panel deemed this to be appropriate. See Criterion 9 and 10 for further comment.

Recommendations:

3.4 Section 4 - Evaluation of the programme by stakeholders

Evaluation by current learners and graduates of the programme
Commentary:

The panel found that there had been good engagement with learners and graduates of the programme in relation to the review and that constructive commentary had made its way into the development of the revised programme. It was noted that learners are represented on the Academic Board of DBS and the panel welcomed this development.

Recommendations:

Evaluation of the programme by Staff
Commentary:

The programme team were actively involved in the review, the panel concluded. There was a thorough review of all aspects of the programme which had been clearly documented.

Recommendations:

External Examiner Feedback
Commentary:

DBS has formal mechanisms in place for working with External Examiners. The panel reviewed their comments on the programme and found that they had been factored into the review.

Recommendations:

3.5   Section 5 - Programme Quality Assurance

Complaints, appeals and commendations

Commentary:

There are clear processes in place for complaints and appeals which ensures that they are dealt with in a speedy manner. Students and graduates that the panel spoke with were aware of these and indicated that, from their knowledge, the complaints and appeals process was robust, speedy and working in practice.

Recommendations:

Quality Assurance Systems and Processes

Commentary:

DBS has robust quality assurance systems in place and it was clear from that documentation that these are updated and reviewed. A QA Officer is on the staff.

Recommendations:

Additional Quality Assurance Systems and Processes required (e.g. online delivery / assessment)

Commentary:

The panel noted that DBS had, due to the constraints of the COVID-19 pandemic, in the final term of 2019-2020 run examinations on line. DBS stated that the arrangements put in place had worked in practice. It was clear that DBS as an institution was keeping this process under review and were working as a team to ensure that additional QA systems were in place to deal with the unprecedented situation.

Recommendations:

3.6 Section 6 - Summary Analysis of the programme

Commentary:

The revised programme has taken account of the views of internal and external stakeholders. The revisions proposed are appropriate. The programme has clear objectives, with a well-constructed curriculum, a clear strategy for teaching, learning and assessment and robust quality assurance procedures. Learners are well informed and cared for in a support environment with adequate staffing and physical resources available to deliver the programme.

The overall programme is aimed at producing work-ready graduates and the practical orientation of the programme is well balanced with a thorough theoretical and academic foundation.

It was noted that graduates are employed in a wide range of companies, ranging from larger corporates to larger SMEs.

Recommendations:

3.7 Section 7 - Revision of the programme

In this section the panel will respond to any proposals made by the provider in respect of changes to the programme arising from the review. The revised programme's readiness for validation will be reported on in more detail in the Independent Evaluation Report for Validation.

Commentary:

The panel was satisfied that the changes proposed for the programme were well thought through and appropriate. Specific recommendations and special conditions were made by the panel for consideration by DBS, as further changes to enhance the programme. These are set out under the various criteria below and in the summary.

Recommendations:

4   Overall Findings

In this section the panel will give its overall feedback on the conduct of the review and the findings therein. This feedback will inform future provider review processes and will also contribute to the refinement of any programmes being proposed for revalidation following this review process.

Commentary on review process:

Overall, the panel is satisfied that the review was comprehensive and thorough, with extensive consultation with staff, industry, learners, external examiners contributing to the final shape of the revised programme.

Recommendations on review process:

Commentary on programme revisions:

The panel is satisfied that the revisions are appropriate.

Recommendations on programme revisions:

Signed:

Panel Chairperson:

Date: 28th September 2020

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

Part 1

Provider name	DBS
Date of site visit	27th August 2020
Date of report	tbd

Overall recommendations

Principal programme	Title	Higher Diploma in Science in Data Analytics
	Award	Higher Diploma in Science
	Credit	60 ECTS
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory*	*Satisfactory subject to proposed conditions*

Embedded programme 1	Title	Certificate in the Fundamentals of Data Analytics
	Award	Certificate in Science
	Credit	15 ECTS
	Recommendation *Satisfactory OR Satisfactory subject to proposed conditions OR Not Satisfactory*	*Satisfactory subject to proposed conditions*

Expert Panel

Name	Role	Affiliation
Colin MLlean	Chair	Higher Education Inspector UAE, Former VP Academic Affairs and Registrar IT Sligo, Former Head of Faculty of Business and Humanities
Rachel Menzies	Subject Matter Expert	Senior Lecturer and Associate Professor in Computing, University of Dundee, former Director of Undergraduate Teaching for Computing
Christopher McLoughlin	Subject Matter Expert	Lecturer in Data Analysis, Quantitative Techniques, Business Analytics & Reporting, IT Sligo
Nigel McKelvey	Subject Matter Expert	Head of Flexible and Online Learning, Lecturer in Computing, Letterkenny IT
Mary Jennings	Report Writer	Independent Consultant
Loreno Waltero	Learner Representative	Student in CTC in Higher Diploma in Computer Science
Armin Saeb	Industry Representative	Speech Recognition Scientist, Soapbox Labs, Lecturer telecommunications

Higher Diploma in Science in Data Analytics

Names of centre(s) where the programme(s) is to be provided	Maximum number of learners *(per centre)*	Minimum number of learners
DBS main campus	450	5

Proposed Enrolment	
Date of first intake	September 2020
Maximum number of annual intakes	3, September, January, March/April
Maximum total number of learners per intake	150
Programme duration *(months from start to completion)*	Full-time: 1 semester of 12 weeks. Part-time: 1 semester of 12 weeks

Panel Commentary on proposed enrolment:

Target learner groups

This programme is aimed at learners with a Level 8 primary undergraduate honours degree with a minimum Pass classification from a recognised third level institution in a non-cognate area. Applicants who do not have a Level 8 qualification and who have at least 3 years' work experience may also be considered through the college's normal RPL procedures. Relevant professional experience may be taken into account and individuals will be assessed on a case-by-case basis through DBS RPL procedures.

This programme may also be of interest to learners with a Level 7 ordinary bachelor's degree in a cognate area (computer science, technology, networking, information systems, engineering, general science, mathematics, statistics, data science) who wish to specialise in the field of Data Analytics with a view to entering the industry, or those who are working in Data Analytics already and who require a qualification in the area in order to progress professionally.

Approved countries for provision	Ireland
Delivery mode: Full-time/Part-time	Full-time and part-time

The teaching and learning modalities

- Classroom lectures
- Case-based learning
- Practical skills sessions

- Workshops
- Tutorials
- Individual and group work
- Online synchronous and asynchronous

Brief synopsis of the programme (e.g. who it is for, what is it for, what is involved for learners, what it leads to.)

This programme has been designed to meet the ongoing need for Data Analysts throughout the workforce which can directly create added value and wealth to the Irish businesses and the society. Technological innovation applied to computing has created a wave of disruptive activity that will change the shape of the global information system over the next decade. The purpose of this programme is to provide students with advanced knowledge, critical thinking and computing skills to be able to meet the industry demands.

The programme offers learners three elective pathways to support the opportunities to focus their development. The pathways being offered are Big Data Analytics, Predictive Data Analytics, Data Visualisation. Semester one (FT) lays the groundwork for the programme and encompasses mostly foundational modules that focus on providing a solid and comprehensive understanding of the relevant concepts, a proficiency in the use of programming for data analytics and Statistics for Data Analytics and Databases and Business Application. Learners initially develop advanced practical skills in essential areas such as programming, and Platforms for Data Analytics while also offering theoretical knowledge of statistics.

Semester two (FT) builds on this by covering advanced modules in which the knowledge, understanding and skills acquired in the first semester can be employed. Semester two modules offer applied skills in topics such as Big Data Managing and Processing, Data and Web Mining and Advanced Data Analytics, as well as Data Visualisation & Communications. Semester two (FT), also comprises a project or placement module, which focuses on applied skills

The project-based module allows the learner to demonstrate their critical thinking in application of knowledge and skills acquired in the programme to solve a clearly defined Industry problem. The project report (& presentation) will outline the literature, methodology, analysis, and discussion to support the innovative solution and its commercial validity.

This is an interdisciplinary programme that focuses on data analytics and computing and its application to the data sciences. It is designed to appeal to graduates seeking to enhance their career prospects in Data Analytics. This is a 1 year full-time, 2 years part-time programme with 10 taught modules including 3 electives which combined, lead to a Higher Diploma in Science in Data Analytics (Level 8, 60 ECTS). There is an embedded award, the Certificate in Science in the Fundamentals of Data Analytics (15 ECTS) available as an exit award from this programme.

Summary of specifications for teaching staff	WTE
Teaching staff will have a minimum of a Level 9 Postgraduate Diploma or Masters in the following areas: Mathematics, Statistics, Computer Science, Computing, Artificial Intelligence, Software Development, Data Analytics, and Data Science . 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 industry experience may also be considered.	an average ratio of 21.4:1, learner to WTE staff ratio

Learning Activity	Ratio of learners to teaching staff
Lecture-based sessions	1-50
Workshops	1-25
Practical lab sessions	1-35
Online sessions (live, non-interactive)	1-50
Online tutorial (interactive)	1-25
Panel Commentary on programme outline and staffing:	

Programmes being replaced (applicable to applications for revalidation)		
Code	**Title**	**Last enrolment date**
N/A	N/A	N/A

Certificate in the Fundamentals of Data Analytics

Names of centre(s) where the programme(s) is to be provided	Maximum number of learners *(per centre)*	Minimum number of learners
DBS Main campus	450	5

Proposed Enrolment	
Date of first intake	September 2020
Maximum number of annual intakes	2, September and January
Maximum total number of learners per intake	450
Programme duration *(months from start to completion)*	Full-time: 1 semester of 12 weeks Part-time: 1 semester of 12 weeks.
Panel Commentary on proposed enrolment:	

Target learner groups
The Certificate the Fundamentals of Data Analytics target learner groups are as per Higher Diploma programme. It is aimed at learners with a Level 8 primary undergraduate honours degree with a minimum Pass classification from a recognised third level institution in a non-cognate area. Applicants who do not have a Level 8 qualification and who have at least 3 years' work experience may also be considered through the college's normal RPL procedures. Relevant professional experience may be taken into account and individuals will be assessed on a case-by-case basis through DBS RPL procedures. This programme may also be of interest to learners with a Level 7 ordinary bachelor's degree in a cognate area (computer science, technology, networking, information systems, engineering, general science, mathematics, statistics, data science) who wish to specialise in the field of Data Analytics with a view to entering the industry, or those who are working in Data Analytics already and who require a qualification in the area in order to progress professionally.

Approved countries for provision	Ireland
Delivery mode: Full-time/Part-time	Full-time and part-time

The teaching and learning modalities
- Classroom lectures   - Case-based learning   - Practical skills sessions   - Workshops   - Tutorials   - Individual and group work   - Online synchronous and asynchronous

Brief synopsis of the programme (e.g. who it is for, what is it for, what is involved for learners, what it leads to.)
The Certificate the Fundamentals of Data Analytics target learner groups are as per Higher Diploma programme. It is aimed at learners with a Level 8 primary undergraduate honours degree with a minimum Pass classification from a recognised third level institution in a non-cognate area. Applicants who do not have a Level 8 qualification and who have at least 3 years' work experience may also be considered through the college's normal RPL procedures. Relevant professional experience may be taken into account and individuals will be assessed on a case-by-case basis through DBS RPL procedures. This programme may also be of interest to learners with a Level 7 ordinary bachelor's degree in a cognate area (computer science, technology, networking, information systems, engineering, general science, mathematics, statistics, data science) who wish to specialise in the field of Data Analytics

with a view to entering the industry, or those who are working in Data Analytics already and who require a qualification in the area in order to progress professionally.

Summary of specifications for teaching staff	WTE
Teaching staff will have a minimum of a Level 9 Postgraduate Diploma or Masters in the following areas: Mathematics, Statistics, Computer Science, Computing, Artificial Intelligence, Software Development, Data Analytics, and Data Science. 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 industry experience may also be considered.	an average ratio of 21.4:1, learner to WTE staff ratio

Learning Activity	Ratio of learners to teaching staff
Lecture-based sessions	1-50
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Online sessions (live, non-interactive)	1-50
Online tutorial (interactive)	1-25
Panel Commentary on programme outline and staffing:	

Programmes being replaced (applicable to applications for revalidation)		
Code	**Title**	**Last enrolment date**
N/A	N/A	N/A

Other noteworthy features of the application

Part 1A Evaluation of the Case for an Extension of the Approved Scope of Provision (where applicable). Having examined appropriate QA / Governance procedures, comment on the case for extending the applicant's Approved Scope of Provision to enable provision of this programme. (Especially relevant for move to online delivery / assessment)

Part 2 Evaluation against the validation criteria

Criterion 1: The provider is eligible to apply for validation of the programme

a) The provider meets the prerequisites (section 44(7) of the 2012 Act) to apply for validation of the programme.

b) The application for validation is signed by the provider's chief executive (or equivalent) who confirms that the information provided is truthful and that all the applicable criteria have been addressed.

c) The provider has declared that their programme complies with applicable statutory, regulatory and professional body requirements.[1]

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

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 this programme. It was noted that DBS has in place procedures for access, transfer and progression as set out in Section 4 of the Programme Document. DBS has also established arrangements for the Protection of Enrolled Learners (PEL) which have been approved by QQI.

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

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

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

a) The programme aims and objectives are expressed plainly.
b) A QQI award is specified for those who complete the programme.
    (i) Where applicable, a QQI award is specified for each embedded programme.
c) There is a satisfactory rationale for the choice of QQI award(s).
d) The award title(s) is consistent with unit 3.1 of QQI's *Policy and Criteria for Making Awards.*
e) The award title(s) is otherwise legitimate for example it must comply with applicable statutory, regulatory and professional body requirements.
f) The programme title and any embedded programme titles are
    (i) Consistent with the title of the QQI award sought.
    (ii) Clear, accurate, succinct and fit for the purpose of informing prospective learners and other stakeholders.
g) For each programme and embedded programme
    (i) The **minimum intended programme learning outcomes** and any other educational or training objectives of the programme are explicitly specified.[2]
    (ii) The minimum intended programme learning outcomes to qualify for the QQI award sought are **consistent with** the relevant QQI awards standards.
h) Where applicable, the **minimum intended module learning outcomes** are explicitly specified for each of the programme's modules.
i) Any QQI minor awards sought for those who complete the modules are specified, where applicable.

For each minor award specified, the minimum intended module learning outcomes to qualify for the award are consistent with relevant QQI minor awards standards.[3]

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

The Panel found that the aims, objectives and rationales for the programmes were expressed clearly, as set out in Section 2.1 of the Programme Document.

It was concluded that the programme and module learning outcomes have been clearly outlined and were appropriate to the level of the awards. The title of the programme was deemed to be appropriate and in line with the QQI standard for the award type on the NFQ.

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

The Panel observed that the minimum intended programme learning outcomes for Higher Diploma in Science in Data Analytics and the Certificate in the Fundamentals of Data Analytics were informed by the QQI Science Awards Standards and have been mapped against these standards.

Criterion 3: The programme concept, implementation strategy, and its interpretation of QQI awards standards are well informed and soundly based (considering social, cultural, educational, professional and employment objectives)

a) The development of the programme and the intended programme learning outcomes has sought out and taken into account the views of stakeholders such as learners, graduates, teachers, lecturers, education and training institutions, employers, statutory bodies, regulatory bodies, the international scientific and academic communities, professional bodies and equivalent associations, trades unions, and social and community representatives.[4]

b) The interpretation of awards standards has been adequately informed and researched; considering the programme aims and objectives and minimum intended programme (and, where applicable, modular) learning outcomes.
   (i) There is a satisfactory rationale for providing the programme.
   (ii) The proposed programme compares favourably with existing related (comparable) programmes in Ireland and beyond. Comparators should be as close as it is possible to find.
   (iii) There is support for the introduction of the programme (such as from employers, or professional, regulatory or statutory bodies).
   (iv) There is evidence[5] of learner demand for the programme.
   (v) There is evidence of employment opportunities for graduates where relevant[6].
   (vi) The programme meets genuine education and training needs.[7]

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

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

e) The programme satisfies any validation-related criteria attaching to the applicable awards standards and QQI awards specifications.

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

Overall, the panel was satisfied that the proposed programmes are soundly based, with adequate consideration given to evolving trends in the computing sector, with specific emphasis on the developments in the growing area of data analytics.

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[4] Awards standards however detailed rely on various communities for their interpretation. This consultation is necessary if the programme is to enable learners to achieve the standard in its fullest sense.

[5] This might be predictive or indirect.

[6] It is essential to involve employers in the programme development and review process when the programme is vocationally or professionally oriented.

[7] There is clear evidence that the programme meets the **target learners'** education and training needs and that there is a clear demand for the programme.

The panel was informed that DBS has forged strong links with industry through its sectoral industry panels and industry representation on its Academic Board, as well as with its learners and graduates. These mechanisms provide a means to inform the development and evolution of programmes that meet a need, particularly the specific needs identified in the field of data analytics. It was noted that many of the learners were already in employment and the programme offered the opportunity to upskill in data analytics in order to add to their effectiveness in their careers.

It was further noted that the programmes were offered through the government-sponsored Springboard initiative, aimed at upskilling or reskilling people in particular area. Data analytics had been identified as an area for development in this context.

The panel was informed that industry feedback indicated the need for graduates to have a broad range of skills in project management, teamwork, interpersonal communications and the ability to present technical topics in an accessible way to non-technical staff. DBS indicated that learners were provided with opportunities to develop these skills through the teaching and learning strategy assessment strategies, work placement and project work based on real life problems encountered in both SMEs and larger corporates.

The panel is satisfied that DBS has undertaken a comprehensive consultation with stakeholders in the development of the proposed programme and commends them for the level of sustained engagement with industry.

Commendation:
The panel commends DBS on the structures in place to maintain strong, sustained links with industry that enhances the implementation and development of the programme.

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

a) The information about the programme as well as its procedures for access, transfer and progression are consistent with the procedures described in QQI's policy and criteria for access, transfer and progression in relation to learners for providers of further and higher education and training. Each of its programme-specific criteria is individually and explicitly satisfied[8].

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

c) If the programme leads to a higher education and training award and its duration is designed for native English speakers, then the level of proficiency in English language must be greater or equal to B2+ in the Common European Framework of Reference for Languages (CEFRL[9]) in order to enable learners to reach the required standard for the QQI award.

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

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

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

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

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

Overall, the Panel was satisfied that the programmes' access, transfer and progression arrangements are appropriate. Information on access, transfer and progression is available through DBS website,

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

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

promotional material and the Student Handbooks. This includes information on EU and non-EU entry requirements and information for learners with disabilities.

It was noted that many of the learners are already in employment or have professional qualifications. It was stated that there is provision for prospective learners to apply via an RPL process that DBS has in place. This is by way of submission of an RPL document, a personal statement and, as appropriate, an interview by the Programme Director. There is a further cohort that comes directly through the Springboard initiative which is aimed at providing more opportunities for employment and to fill identified skill gaps.

There are opportunities for progression to BSc in Computing, provided the applicant meets the standards required, including standards for proficiency in English for non-English speakers.

 The panel found these arrangements for access and progression to be satisfactory.

The panel was informed that DBS holds induction sessions through the Programme Coordinator for learners to provide special details on areas such as assessment rubrics and how to use MOODLE effectively. Non-academic topics are covered by Student Support Services as required.

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

a) The programme is suitably structured and coherently oriented towards the achievement by learners of its intended programme learning outcomes. The programme (including any stages and modules) is integrated in all its dimensions.

b) In so far as it is feasible the programme provides choice to enrolled learners so that they may align their learning opportunities towards their individual educational and training needs.

c) Each module and stage is suitably structured and coherently oriented towards the achievement by learners of the intended *programme* learning outcomes.

d) The objectives and purposes of each of the programme's elements are clear to learners and to the provider's staff.

e) The programme is structured and scheduled realistically based on sound educational and training principles[10].

f) The curriculum is comprehensively and systematically documented.

g) The credit allocated to the programme is consistent with the difference between the entry standard and minimum intended programme learning outcomes.

h) The credit allocated to each module is consistent with the difference between the module entry standard and minimum intended module learning outcomes.

i) Elements such as practice placement and work-based phases are provided with the same rigour and attentiveness as other elements.

j) The programme duration (expressed in terms of time from initial enrolment to completion) and its fulltime equivalent contact time (expressed in hours) are consistent with the difference between the minimum entry standard and award standard and with the credit allocation.[11]

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Partially	See conditions specified.
Certificate in the Fundamentals of Data Analytics	Partially	See conditions specified.

In general, the panel found that the written curriculum was well structured and fit for purpose. The panel did include special conditions to be addressed by DBS. These are set out below.

The panel also made specific recommendations on the content and naming of some of the modules with a view to providing greater clarity in the documentation provided. There are also outlined below.

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

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

Module 7: Advanced Data Analytics

The panel noted that the content and learning outcomes as outlined were comprehensive and well structured, with opportunities for learners to gain knowledge of advanced concepts in areas such as how to break down a neural network and to work with concepts such as latent modelling. The panel found that the title of the module did not reflect its richness.

Recommendation:

It is recommended that DBS review the title of module 7, Advanced Data Analytics to better reflect its rich content.

Module 8: Data Visualisation & Communications

The panel was informed that feedback from industry that the skill of being able to present the outputs of data analytics to a range of different audiences, including non-technical experts, was an important one for graduates to demonstrate. DBS indicated that the key objectives of this module were to equip learners with the necessary tools to do this effectively, using platforms such as storytelling/tableau. The panel noted that it was therefore important to assess this skill of being able to engage with diverse audiences effectively and recommended that this be made an explicit part of the assessment strategy.

Recommendation:

It is recommended that DBS make it explicit in the type of assessment used in module 8 that learners can demonstrate that they understand the needs of diverse audiences in the way analysis of data is presented in a variety of ways.

Module 9: Advanced Analytics and Web Application

The panel found that the wording of Learning Outcome 1 did not appropriately reflect the level of the award on the NFL and recommended that DBS review this.

Recommendation:

It is recommended that DBS review the wording of Learning Outcome 1 in Module 9 to reflect the level of the award on NFQ.

Module 10: Project/Placement

The panel found that it was not clear in the documentation that learners could elect to complete either a final project or a work placement and that this was not foregrounded sufficiently. The panel further indicated that it was not clear if a project or a placement had the same learning outcomes. It is a specific condition that this be clarified.

Condition:

It is a condition that DBS clarify that learners have the options to complete either a project or a work placement and that this is foregrounded in the documentation provided and that the learning outcomes of both options are aligned and outlined in the documentation as well.

The panel is not satisfied that the assessment strategy of the required report by learners on this module is sufficiently clear. Specifically, it is not clear what percentage is allocated to the report and what percentage is allocated to the artefact that learners are required to produce as a requirement. It is a condition that DBS review and provide greater clarity on this point.

Condition:

It is a condition that DBS review the assessment strategy in relation to the project/placement module and ensure that the assessment includes a percentage mark for the report as well as a percentage mark for the artefact produced.

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

a) The specification of the programme's staffing requirements (staff required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme and its defined purpose. The specifications include professional and educational qualifications, licences-to-practise where applicable, experience and the staff/learner ratio requirements. See also criterion 12 c).

b) The programme has an identified complement of staff[12] (or potential staff) who are available, qualified and capable to provide the specified programme in the context of their existing commitments.

c) The programme's complement of staff (or potential staff) (those who support learning including any employer-based personnel) are demonstrated to be competent to enable learners to achieve the intended programme learning outcomes and to assess learners' achievements as required.

d) There are arrangements for the performance of the programme's staff to be managed to ensure continuing capability to fulfil their roles and there are staff development[13] opportunities[14].

e) There are arrangements for programme staff performance to be reviewed and there are mechanisms for encouraging development and for addressing underperformance.

f) Where the programme is to be provided by staff not already in post there are arrangements to ensure that the programme will not enrol learners unless a complement of staff meeting the specifications is in post.

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

The panel was advised that teaching staff are qualified to a minimum of NFQ Level 9 with many qualified to doctoral level or enrolled in doctoral studies. CVs of teaching staff were provided in the documentation provided to the panel. It was stated that there is a full complement of staff is in place

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

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

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

to deliver the programme. DBS also makes use of guest lecturers with appropriate industry experience to provide an additional element on the programme.

The panel was informed that newer members of staff are provided with mentoring through formal and informal ways. This included bringing them through how to use MOODLE effectively and consistently and providing information on DBS structures such as the Academic Board's role and function. There is also informal mentoring through the culture of close team work, the panel was informed.

With the challenges presented by the COVID-19 pandemic and the subsequent need to use and mix a range of learning methodologies including blended learning, the panel was informed that DBS, through its Dept of Quality Enhancement and Innovation in Teaching and Learning. has put in place a tiered structure to provide staff with a range of opportunities to increase their level of skill in this area.

It was stated that DBS is also looking at having its own formal accredited CPD as a means of further encouraging and enhancing staff development.

In conversation with the graduates and learners, the panel was informed that, at times, learners had multiple different teachers in a single module, with a consequent lack of continuity experienced by learners.

Recommendation:

It is recommended that, where possible, DBS formalise the teaching cohort on each module from the start and make this clear to the learners from the beginning.

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

a) The specification of the programme's physical resource requirements (physical resources required as part of the programme and intrinsic to it) is precise, and rigorous and consistent with the programme, its defined purpose and its resource/learner-ratio requirements. See also criterion 12 d).

b) The programme has an identified complement of supported physical resources (or potential supported physical resources) that are available in the context of existing commitments on these e.g. availability of:
   (i) suitable premises and accommodation for the learning and human needs (comfort, safety, health, wellbeing) of learners (this applies to all of the programme's learning environments including the workplace learning environment)
   (ii) suitable information technology and resources (including educational technology and any virtual learning environments provided)
   (iii) printed and electronic material (including software) for teaching, learning and assessment
   (iv) suitable specialist equipment (e.g. kitchen, laboratory, workshop, studio) – if applicable
   (v) technical support
   (vi) administrative support
   (vii) company placements/internships – if applicable

c) If versions of the programme are provided in parallel at more than one location each independently meets the location-sensitive validation criteria for each location (for example staffing, resources and the learning environment).

d) There is a five-year plan for the programme. It should address
   (i) Planned intake (first five years) and
   (ii) The total costs and income over the five years based on the planned intake.

e) The programme includes controls to ensure entitlement to use the property (including intellectual property, premises, materials and equipment) required.

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

The panel is satisfied that there are sufficient physical resources to implement the programme as planned.

As the review by the panel took place via the Zoom platform the panel was informed by the DBS team on the library facilities, classroom and study facilities and technology services. The panel was informed that DBS Library comprises a physical library at Aungier Street and an extensive online library which is accessible via the Library Website (http://library.dbs.ie/).

It was stated, that, in the current environment, in order to maintain the required social distancing, DBS proposed to have allocated timeslots for access to computer labs. It also has in place a number

of mobile labs for rapid deployment in classrooms or other rooms on the campus. Access to computer facilities are available to students at weekends also.

It was further stated that DBS had sufficient capacity through investment in software licences to provide access to learners online or offline as required and that this was kept under review on a continual basis.

The panel is satisfied that there are sufficient physical resources to implement the programme as planned.

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

a) The programme's physical, social, cultural and intellectual environment (recognising that the environment may, for example, be partly virtual or involve the workplace) including resources and support systems are consistent with the intended programme learning outcomes.

b) Learners can interact with, and are supported by, others in the programme's learning environments including peer learners, teachers, and where applicable supervisors, practitioners and mentors.

c) The programme includes arrangements to ensure that the parts of the programme that occur in the workplace are subject to the same rigours as any other part of the programme while having regard to the different nature of the workplace.

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

The panel was informed that there are mechanisms in place to ensure that learners have the appropriate level of learner supports in the current environment, involving more delivery online with more restricted numbers on campus due to social distancing requirements. Contingency planning for the new academic year foresees a proposed induction to online learning as the new term begins, provision of access to appropriate software and the recording of classes and additional library services. See also Criterion 7 above.

	Criterion 9: There are sound teaching and learning strategies	

Criterion 9: There are sound teaching and learning strategies

a) The teaching strategies support achievement of the intended programme/module learning outcomes.
b) The programme provides authentic learning opportunities to enable learners to achieve the intended programme learning outcomes.
c) The programme enables enrolled learners to attain (if reasonably diligent) the minimum intended programme learning outcomes reliably and efficiently (in terms of overall learner effort and a reasonably balanced workload).
d) Learning is monitored/supervised.
a) Individualised guidance, support15 and timely formative feedback is regularly provided to enrolled learners as they progress within the programme.

	Satisfactory? (yes, no, partially)	**Comment**
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

In general, the panel is satisfied that there are sound teaching and learning strategies in place to deliver the programmes as proposed.

The Programme Team advised the panel that the whole area of technology-enhanced, blended learning was changing, with disruption caused by Covid-19 pandemic accelerating a process already in train. Examples provided to the panel included the more interactive use of MOODLE to both enhance student engagement and promote more independent learning, whereby activities and resources are well scaffolded through in-class learning and continued on MOODLE. The panel was informed that DBS had a clear process in place for upskilling and mentoring of staff in use of blended learning techniques in order to equip them for the challenges posed by current circumstances. See Criterion 6 for further comment.

The panel found, in conversation with graduates and learners, that DBS did not consistently provide access to industry-standard software and that therefore the tools and technologies used in teaching and learning did not always reflect what was being used in industry.

Recommendation:

It is recommended that DBS ensure that there is a consistent use of and access to up to date industry-standard software in teaching and learning strategies.

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

Criterion 10: There are sound assessment strategies

   b) All assessment is undertaken consistently with *Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards*[16]

   c) The programme's assessment procedures interface effectively with the provider's QQI approved quality assurance procedures.

   d) 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.[17]

   e) The programme includes formative assessment to support learning.

   f) 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.[18]

   g) 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.

   h) There are sound procedures for the moderation of summative assessment results.

   i) 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.[19]

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

In general, the panel is satisfied that there are sound assessment strategies in place. The panel made a recommendation in relation to ensuring that the assessment strategy was clear in relation to all modules. See Criterion 5 above with commentary on a number of modules which covers some aspects of assessment in this regard.

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[16] See the section on transitional arrangements.

[17] This assumes the minimum intended programme/module learning outcomes are consistent with the applicable awards standards.

[18] The programme assessment strategy is addressed in the Assessment Guidelines, Conventions and Protocols for Programmes Leading to QQI Awards. See the section on transitional arrangements.

[19] If the award is a QQI CAS compound award it is not necessarily sufficient that the learner has achieved all the components specified in the certification requirements unless at least one of those components is a capstone component (i.e. designed to test the compound learning outcomes).

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

a) There are arrangements to ensure that each enrolled learner is fully informed in a timely manner about the programme including the schedule of activities and assessments.

b) Information is provided about learner supports that are available to learners enrolled on the programme.

c) Specific information is provided to learners enrolled on the programme about any programme-specific appeals and complaints procedures.

d) If the programme is modular, it includes arrangements for the provision of effective guidance services for learners on the selection of appropriate learning pathways.

e) The programme takes into account and accommodates to the differences between enrolled learners, for example, in terms of their prior learning, maturity, and capabilities.

f) There are arrangements to ensure that learners enrolled on the programme are supervised and individualised support and due care is targeted at those who need it.

g) The programme provides supports for enrolled learners who have special education and training needs.

h) The programme makes reasonable accommodations for learners with disabilities[20].

i) If the programme aims to enrol international students it complies with the *Code of Practice for Provision of Programmes to International Students*[21] and there are appropriate in-service supports in areas such as English language, learning skills, information technology skills and such like, to address the particular needs of international learners and enable such learners to successfully participate in the programme.

j) The programme's learners will be well cared for and safe while participating in the programme, (e.g. while at the provider's premises or those of any collaborators involved in provision, the programme's locations of provision including any workplace locations or practice-placement locations).

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

The panel was advised that DBS has a number of specific supports at a central level to provide services to learners. This includes the Student Experience Department which encompasses Careers and Student Services who work to enhance the experience of students at all stages. It was stated that there is a system of class reps and class mentors in place and which was working well, with good, active engagement by DBS staff and learners, all of which contributed to the building of a supportive environment, particularly in the current challenges posed by COVID-19

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[20] For more information on making reasonable accommodations see www.AHEAD.ie and QQI's Policies, Actions and Procedures for Access, Transfer and Progression for Learners (QQI, restated 2015).

[21] See Code of Practice for Provision of Programmes to International Students (QQI, 2015)

Criterion 12: The programme is well managed

a) The programme includes intrinsic governance, quality assurance, learner assessment, and access, transfer and progression procedures that functionally interface with the provider's general or institutional procedures.

b) The programme interfaces effectively with the provider's QQI approved quality assurance procedures. Any proposed incremental changes to the provider's QA procedures required by the programme or programme-specific QA procedures have been developed having regard to QQI's statutory QA guidelines. If the QA procedures allow the provider to approve the centres within the provider that may provide the programme, the procedures and criteria for this should be fit-for-the-purpose of identifying which centres are suited to provide the programme and which are not.

c) There are explicit and suitable programme-specific criteria for selecting persons who meet the programme's staffing requirements and can be added to the programme's complement of staff.

d) There are explicit and suitable programme-specific criteria for selecting physical resources that meet the programmes physical resource requirements, and can be added to the programme's complement of supported physical resources.

e) Quality assurance[22] is intrinsic to the programme's maintenance arrangements and addresses all aspects highlighted by the validation criteria.

f) The programme-specific quality assurance arrangements are consistent with QQI's statutory QA guidelines and use continually monitored completion rates and other sources of information that may provide insight into the quality and standards achieved.

g) The programme operation and management arrangements are coherently documented and suitable.

h) There are sound procedures for interface with QQI certification.

	Satisfactory? (yes, no, partially)	Comment
Higher Diploma in Science in Data Analytics	Yes	
Certificate in the Fundamentals of Data Analytics	Yes	

The panel is satisfied that there are effective structures in place for the governance and management of the proposed programme. The QAH contains the governance structures for the College and sets out procedures for access, transfer and progression, learner assessments and supports, and teaching and learning.

The panel is further satisfied that the QAH and associated policies and procedures have been developed in line with QQI statutory guidelines.

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

Overall recommendation to QQI

Higher Diploma in Science in Data Analytics

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;
Satisfactory subject to conditions	Satisfactory subject to proposed special conditions (specified with timescale for compliance for each condition; these may include proposed pre-validation conditions i.e. proposed (**minor**) things to be done to a programme that almost fully meets the validation criteria before QQI makes a determination);
	Not satisfactory.

Reasons for the overall recommendation

The programme meets the criteria for validation subjection to the special conditions specified.

Commendations

1. The panel commends DBS on the structures in place to maintain strong, sustained links with industry that enhances the implementation and development of the programme.

Special Conditions of Validation (directive and with timescale for compliance)

1. It is a condition that DBS review the assessment strategy in relation to the project/placement module and ensure that the assessment includes a percentage mark for the report as well as a percentage mark for the artefact produced.
2. It is a condition that DBS clarify that learners have the options to complete either a project or a work placement and that this is foregrounded in the documentation provided and that the learning outcomes of both options are aligned and outlined in the documentation as well.

Certificate in the Fundamentals of Data Analytics

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;
Satisfactory subject to conditions stated.	Satisfactory subject to proposed special conditions (specified with timescale for compliance for each condition; these may include proposed pre-validation conditions i.e. proposed (**minor**) things to be done to a programme that almost fully meets the validation criteria before QQI makes a determination);
	Not satisfactory.

Reasons for the overall recommendation

The programme meets the criteria for validation subjection to the special conditions specified.

Commendations

The panel commends DBS on the structures in place to maintain strong, sustained links with industry that enhances the implementation and development of the programme.

Special Conditions of Validation (directive and with timescale for compliance)

1 It is a condition that DBS review the assessment strategy in relation to the project/placement module and ensure that the assessment includes a percentage mark for the report as well as a percentage mark for the artefact produced.

2 It is a condition that DBS clarify that learners have the options to complete either a project or a work placement and that this is foregrounded in the documentation provided and that the learning outcomes of both options are aligned and outlined in the documentation as well.

Summary of recommended special conditions of validation

1 It is a condition that DBS review the assessment strategy in relation to the project/placement module and ensure that the assessment includes a percentage mark for the report as well as a percentage mark for the artefact produced.

2 It is a condition that DBS clarify that learners have the options to complete either a project or a work placement and that this is foregrounded in the documentation provided and that the learning outcomes of both options are aligned and outlined in the documentation as well.

Summary of recommendations to the provider

1   It is recommended that DBS review the title of module 7, Advanced Data Analytics to better reflect its rich content.
2   It is recommended that DBS make it explicit in the type of assessment used in this module that learners can demonstrate that they understand the needs of diverse audiences and can address these in appropriate ways in the way analysis of data is presented.
3   It is recommended that DBS review the wording of Learning Outcome 1 in Module 9 to reflect the level of the award on NFQ.
4   It is recommended that, where possible, DBS formalise the teaching cohort on each module from the start and make this clear to the learners from the beginning.
5   It is recommended that DBS ensure that there is a consistent use of and access to up to date industry-standard software in teaching and learning strategies.

Declarations of Evaluators' Interests

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

Panel chairperson: Colin McLean   Date: 28th September 2020

Signed:

4.1   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.

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

Part 3: Proposed programme schedules

Name of Provider:	Dublin Business School
Programme Title	Higher Diploma in Science in Data Analytics
Award Title	Higher Diploma in Science
Stage Exit Award Title[3]	N/A
Modes of Delivery (FT/PT):	Full-time
Teaching and learning modalities	Formal lectures, seminars interactive group work, specific learning groups as defined by area of academic need, workshops, presentations, educator/teacher review, case-based learning, problem based learning

Award Class[4]	Award NFQ level	Award EQF Level	Stage (1, 2, 3, 4, …, or Award Stage):	Stage NFQ Level[2]	Stage EQF Level[2]	Stage Credit (ECTS)	Date Effective	ISCED Subject code
Major	8	6	Award	8	6	60	Sept 2020	0613

Module Title (Up to 70 characters including spaces)	Semester no where applicable. (Semester 1 or Semester2)	Module Status[23]	NFQ Level[1] where specified	Credit Units ECTS	Total Hours	Class (or equiv)	Directed e-learning	Hours of Independent Learning	Work-based	C.A. %	Supervised Project %	Proctored practical demonstration %	Proctored written exam %
Statistics for Data Analytics	1	M	8	5	125	30	19	76		100			
Programming for Data Analytics	1	M	8	10	250	60	62	128		100			
Databases and Business Applications	1	M	8	5	125	30	19	76		60			40
Platforms for Data Analytics	1	M	8	10	250	60	62	128		100			
Big Data Managing and Processing	2	E	8	5	125	30	19	76		50			50
Data and Network Mining	2	M	8	5	125	30	19	76		50			50
Advanced Data Analytics	2	E	8	10	250	60	62	128		100			
Data Visualisation & Communications	2	E	8	5	125	30	19	76		100			
Advanced Analytics and Web Application	2	E	8	10	250	60	62	128		100			
Project	2	E	8	10	250	18			232		100		
Placement	2	E	8	10	250	4			246		100		

Special Regulations (Up to 280 characters)

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[23] Mandatory (m) or elective (E)

[24] Work-based learning effort is not the number of hours in the workplace. For example, a person might spend 35 hours in the workplace as a trainee and this might involve 7 hours of learning effort.

Name of Provider:			Dublin Business School						
Programme Title			Higher Diploma in Science in Data Analytics						
Award Title			Higher Diploma in Science						
Stage Exit Award Title[3]			N/A						
Modes of Delivery (FT/PT):			Part-time						
Teaching and learning modalities			Formal lectures, seminars interactive group work, specific learning groups as defined by area of academic need, workshops, presentations, educator/teacher review, case-based learning, problem based learning						

Award Class[4]	Award NFQ level	Award EQF Level	Stage (1, 2, 3, 4, …, or Award Stage):	Stage NFQ Level[2]	Stage EQF Level[2]	Stage Credit (ECTS)	Date Effective	ISCED Subject code
Major	8	6	Award	8	6	60	Sept 2020	0613

Module Title (Up to 70 characters including spaces)	Semester no where applicable. (Semester 1 or Semester2)	Module		Credit Number[5]	Total Student Effort Module (hours)					Allocation Of Marks (from the module assessment strategy)				
		Status	NFQ Level[1] where specified	Credit Units ECTS	Total Hours	Class (or equiv)	Directed e-learning	Hours of Independent Learning	Work-based	C.A. %	Supervised Project %	Proctored practical demonstration %	Proctored written exam %
Statistics for Data Analytics	1	M	8	5	125	18	31	76		100			
Programming for Data Analytics	1	M	8	10	250	30	68	152		100			
Databases and Business Applications	2	M	8	5	125	18	31	76		60			40
Platforms for Data Analytics	2	M	8	10	250	30	68	152		100			
Big Data Managing and Processing	3	E	8	5	125	18	31	76		50			50
Advanced Data Analytics	3	E	8	10	250	30	68	152		100			
Data Visualisation & Communications	3	E	8	5	125	18	31	76		100			
Advanced Analytics and Web Application	3	E	8	10	250	30	68	152		100			
Data and Network Mining	3	M	8	5	125	18	31	76		50			50
Project	4	E	8	10	250	18			232		100		
Placement	4	E	8	10	250	4			246		100		
Special Regulations (Up to 280 characters)													

[25] Mandatory (m) or elective (E)

[26] Work-based learning effort is not the number of hours in the workplace. For example, a person might spend 35 hours in the workplace as a trainee and this might involve 7 hours of learning effort.