

# CERTIFICATE OF VALIDATION

<b>Provider Name</b>	National College of Ireland
<b>Date of Validation</b>	18-Jul-19

	<b>First intake</b>	<b>Last intake</b>
<b>Enrolment Interval</b>	Sep-19	Aug-24

	Code	Title	Award	Duration (Months)	Annual Intakes
<b>Principal Programme</b>	PG24111	Master of Science in Data Analytics	HET L9 Major Award pending (Major Award at NFQ Level 9) HETMAJ9 90 credits	1 year FT 2 years PT	2
<b>Embedded Programmes</b>	PG24112	Postgraduate Diploma in Science in Data Analytics	HET L9 Major Award pending (Major Award at NFQ Level 9) HETMAJ9 60 Credits	1 year FT 2 years PT	2

## Principal Programme

### 5 Year Plan: Planned total enrolment i.e. aggregated across all intakes and all approved centres

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Minimum Intake into first year</b>	50	50	50	50	50
<b>Maximum Intake into first year</b>	300	300	300	300	300

<b>Target Learner groups</b>	The MSc in Data Analytics is intended for graduate students who have attained a minimum 2.2 Honours Bachelors Degree (Level 8 NFQ or equivalent) in a numerate discipline, e.g., Computing, Engineering, Economics, Business, Accounting, etc.
<b>Brief Synopsis of the programmes</b>	This programme is a 1-year MSc degree aimed at graduate students who have attained a minimum 2.2 in a Honours Bachelors Degree (Level 8 NFQ or equivalent) in a numerate discipline. It will run on both a part-time and full-time basis. The programme leads to a NFQ level 9 award of MSc in Data Analytics awarded by QQI. Graduates of the programme take up roles as data scientists and data analysts.
<b>Delivery mode: full-time / part-time</b>	Full-time and part-time
<b>Teaching and Learning Modes</b>	Blended learning combining different strategies, including traditional classroom lectures, tutorials and seminars, flipped classroom, problem and project-based learning, team work and work-based learning. Synchronous Online delivery.
<b>Approved countries</b>	Ireland
<b>Physical resource requirements</b>	The programme requires appropriate learning spaces to facilitate the teaching, learning & assessment strategy of the programme. Learning spaces should accommodate traditional classrooms, spaces for collaborative learning and access to appropriate technologies as required by individual module curriculum (e.g., Word, Excel, PowerPoint, R/RStudio, SPSS, or similar products). Students must also have access to appropriate personal study space. Access to appropriate recreation and dining spaces are also required.

**Staff Profiles**

<b>Qualifications and Experience</b>	<b>WTE</b>
Lecturers qualified to a minimum Masters Level (Level 9 NFQ or equivalent) in a numerate discipline with experience delivering modules in ICT, Maths and Statistics, Programming, and Data Analytics at Level 9.	12
Programme Directors who are responsible for the academic management of the programme and may also be lecturers on the programme.	2
Programme Co-ordinators who are responsible for coordinating the administration aspects of the programme.	2

**Approved Centres**

<b>Centre</b>	<b>Minimum Number of learners per intake per Centre</b>	<b>Maximum Number of learners per intake per Centre</b>
National College of Ireland, IFSC Campus	15	100

**Learner Teacher Ratios**

<b>Learning Activity</b>	<b>Ratio</b>
Tutorials/Labs	1:25
Lectures	1:60

**Programme being replaced by this programme**

<b>Prog Code</b>	<b>Programme Title</b>	<b>Validated</b>	<b>To Close</b>
PG20835	Master of Science in Data Analytics	11-Apr-18	

# Embedded Programme

Code	Title	Award	Duration (Months)	Annual Intakes
PG24112	Postgraduate Diploma in Science in Data Analytics	HET L9 Major Award pending HETMAJ9 60 credits	1 year FT 2 years PT	2

## 5 Year Plan: Planned total enrolment i.e. aggregated across all intakes and all approved centres

	Year 1	Year 2	Year 3	Year 4	Year 5
Minimum Intake into first year	30	30	30	30	30
Maximum Intake into first year	300	300	300	300	300

### Target Learner groups

The Postgraduate Diploma in Data Analytics is intended for graduate students who have attained a minimum 2.2 Honours Bachelors Degree (Level 8 NFQ or equivalent) in a numerate discipline, e.g., Computing, Engineering, Economics, Business, Accounting, etc.

### Brief Synopsis of the programmes

This programme is a 1-year Postgraduate Diploma degree aimed at graduate students who have attained a minimum 2.2 in a Honours Bachelors Degree (Level 8 NFQ or equivalent) in a numerate discipline. It will run on both a part-time and full-time basis. The programme leads to a NFQ level 9 award of Postgraduate Diploma in Science in Data Analytics awarded by QQI. Graduates of the programme take up roles as data scientists and data analysts.

### Delivery mode: full-time / part-time

Full-time and part-time

### Teaching and Learning Modes

Blended learning combining different strategies, including traditional classroom lectures, tutorials and seminars, flipped classroom, problem and project-based learning, team work and work-based learning.  
Synchronous Online delivery.

### Approved countries where enrolled learners will be based

Ireland

### Physical resource requirements

The programme requires appropriate learning spaces to facilitate the teaching, learning & assessment strategy of the programme. Learning spaces should accommodate traditional classrooms, spaces for collaborative learning and access to appropriate technologies as required by individual module curriculum (e.g., Word, Excel, PowerPoint, R/RStudio, SPSS, or similar products).  
Students must also have access to appropriate personal study space.  
Access to appropriate recreation and dining spaces are also required.

### Staff Profiles

Qualifications and Experience	WTE
Lecturers qualified to a minimum Masters Level (Level 9 NFQ or equivalent) in a numerate discipline with experience delivering modules in ICT, Maths and Statistics, Programming, and Data Analytics at Level 9.	12
Programme Directors who are responsible for the academic management of the programme and may also be lecturers on the programme.	2

Programme Co-ordinators who are responsible for coordinating the administration aspects of the programme.	2
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**Approved Centres**

Centre	Minimum Number of learners per intake per Centre	Maximum Number of learners per intake per Centre
National College of Ireland, IFSC Campus	15	120

**Learner Teacher Ratios**

Learning Activity	Ratio
Tutorials/Labs	1:25
Lectures	1:60

**Programme being replaced by this programme**

Prog Code	Programme Title	Validated	To Close
PG20843	Postgraduate Diploma in Science in Data Analytics	04-Jun-14	

# Conditions of Validation of the Programmes Covered by this Certificate of Validation

## Part 1: Statutory Conditions of Validation

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

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

## Part 2 Conditions of Validation Established by QQI Under section 45(4)(b) of the 2012 Act)

### Part 2.1 Condition of Validation Concerning a Change in the QQI Award or Award Standard

- 1.Where QQI changes an award title, an award specification or an award standard that a programme depends upon, the provider shall not enrol any further learners on the affected programmes unless informed otherwise in writing by QQI (e.g. by the issue of a revised certificate of validation). The programme is considered validated for learners already enrolled on the affected programme.

### Part 2.2 Condition of Validation Concerning the Duration of Enrolment

- 1.The duration of enrolment is the interval during which learners may be enrolled on the validated programme.

Validation is determined by QQI for a specified number of years of enrolment appropriate to the particular programme as indicated on the certificate on validation subject to unit 9.2.1. It is a condition of validation that the programme does not enrol any new learners outside this interval. A typical duration would be five years.

If a provider wishes to continue to enrol learners to the programme beyond this interval the provider must arrange in good time for it to be validated again by QQI, or exceptionally the provider may apply for extension of the duration of enrolment (unit (14)). In this context the provider may apply for validation of the programme from first principles or, alternatively, the provider may avail of the process for revalidation (unit (13)) by QQI.

### Part 2.3 General Condition of Validation

The provider of the programme shall:

- 1.Ensure that the programme as implemented does not differ in a material way from the programme as validated; differing in a material way is defined as differing in any aspect of the programme or its implementation that was material to QQI's validation criteria.
- 2.Ensure that the programme is provided with the appropriate staff and physical resources as validated.
- 3.Implement in respect of the programme its written quality assurance procedures (as approved by QQI).
- 4.Make no significant change to the programme without the prior approval of QQI. (See unit (8)).
- 5.Unless otherwise agreed by QQI in writing, start implementing the programme as validated and enrol learners within 18 months of validation.

6.Continue in respect of the validated programme to comply with section 56 of the 2012 Act in respect of procedures for access, transfer and progression.

7.Implement the programme and procedures for assessment of learners in accordance with the Approved Programme Schedule and notify QQI in writing of any amendments to this arising from changes to the programme; see unit (9).

8.When advertising and promoting the programme and awards, use the programme title as validated, and the correct QQI award title(s), award type(s) and award class(es) indicating the level of the award(s) on the National Framework of Qualifications.

9.Adhere to QQI regulations and procedures for certification.

10.Notify QQI in writing without delay of:

a. any material change to the programme;

a. anything that impacts on the integrity or reputation of the programme or the corresponding QQI awards;

b. anything that infringes the conditions of validation; or

c. anything that would be likely to cause QQI to consider reviewing the validation.

11.Notify QQI in writing to determine the implications for the provider's validated programmes, where the provider is likely to, or planning to, merge (amalgamate) with another entity or to acquire, or be acquired by, another entity (see unit (12.5)).

12.Report to QQI, when required or requested, on its implementation of the programme and compliance with the conditions of validation.

#### **Part 2.4 General Condition of Validation Arising from Specialised Validation Policy and Criteria**

1. n/a

#### **Part 2.5 Special Conditions of Validation**

n/a

## MSc in Data Analytics (Full-time Delivery Schedule)

<b>Name of Provider:</b>		<b>National College of Ireland</b>																
<b>Programme Title</b>		MSc in Data Analytics																
<b>Award Title</b>		MSc in Data Analytics																
<b>Stage Exit Award Title<sup>3</sup></b>																		
<b>Modes of Delivery (FT/PT):</b>		FT																
<b>Teaching and learning modalities</b>		Direct contact via lectures and demonstrations, Blended e-learning																
<b>Award Class<sup>4</sup></b>	<b>Award NFQ level</b>	<b>Award EQF Level</b>	<b>Stage (1, 2, 3, 4, ..., or Award Stage):</b>	<b>Stage NFQ Level<sup>2</sup></b>	<b>Stage EQF Level<sup>2</sup></b>	<b>Stage Credit (ECTS)</b>	<b>Date Effective</b>	<b>ISCED code</b>	<b>Subject</b>									
Major	9	7	Award	9	7	90	Sept 2019	0610										
<b>Module Title</b> (Up to 70 characters including spaces)	<b>Semester no where applicable. (Semester 1 or Semester2)</b>	<b>Module</b>		<b>Credit Number<sup>5</sup></b>	<b>Total Student Effort Module (hours)</b>						<b>Allocation Of Marks (from the module assessment strategy)</b>							
		<b>Status</b>	<b>NFQ Level<sup>1</sup> where specified</b>	<b>Credit Units</b> ECTS	<b>Total Hours</b>	<b>Contact</b>	<b>Class (or equiv)</b>	<b>e-learning</b>	<b>Directed Learning</b>	<b>Independent Learning</b>	<b>Hours of learning</b>	<b>Work-based</b>	<b>C.A. %</b>	<b>Supervised Project</b>	<b>practical demonstr</b>	<b>Proctored</b>	<b>written exam %</b>	<b>Proctored</b>
Statistics for Data Analytics	1	M	9	10	250	48		202				35					65	
Database and Analytics Programming	1	M	9	10	250	48		202				100						
Data Mining and Machine Learning I	1	M	9	5	125	48		77				100						
Business Intelligence and Business Analytics	1	E	9	5	125	36		89				100						
Data Intensive Architectures	1	E	9	5	125	48		77				100						
Innovation I	1	E	9	5	125	36		89				100						
Modelling, Simulation, and Optimization	2	M	9	10	250	48		202				60					40	
Data Mining and Machine Learning II	2	M	9	10	250	48		202				50					50	
Research In Computing	2	M	9	5	125	36		89				100						
Domain Applications of Predictive Analytics	2	E	9	5	125	36		89				100						
Scalable Systems Programming	2	E	9	5	125	48		77				50					50	
Innovation II	2	E	9	5	125	36		89				100						
Data Governance and Ethics	3	M	9	5	100	30		70				100						
Research Project	3	M	9	25	625	12		588					100					
<b>Special Regulations</b> (Up to 280 characters): Availability of elective modules will be conditional on i) timetable arrangements, and ii) that the number of students electing to take the module exceeds a given minimum number. In both semester 1 and semester 2, learners must complete an elective module (or elective modules) that account for 10 ECTS credits ( 5 ECTS per semester). A student must pass Research in Computing and not repeat more than 10 ECTS credits to be eligible to register for the Research Project elective. In semester 3, learners must complete and pass either the Research Project.																		

## MSc in Data Analytics (Part-time Delivery Schedule)

<b>Name of Provider:</b>		<b>National College of Ireland</b>														
<b>Programme Title</b>		MSc in Data Analytics														
<b>Award Title</b>		MSc in Data Analytics														
<b>Stage Exit Award Title<sup>3</sup></b>		Postgraduate Diploma in Science in Data Analytics														
<b>Modes of Delivery (FT/PT):</b>		<b>PT</b>														
<b>Teaching and learning modalities</b>		Direct contact via lectures and demonstrations, Blended e-learning														
<b>Award Class<sup>4</sup></b>	<b>Award NFQ level</b>	<b>Award EQF Level</b>	<b>Stage (1, 2, 3, 4, ..., or Award Stage):</b>	<b>Stage NFQ Level<sup>2</sup></b>	<b>Stage EQF Level<sup>2</sup></b>	<b>Stage Credit (ECTS)</b>	<b>Date Effective</b>	<b>ISCED code</b>	<b>Subject</b>							
Major	9		Award	9		90	Sept 2019									
<b>Module Title</b> (Up to 70 characters including spaces)	<b>Semester no where applicable. (Semester 1 or Semester2)</b>	<b>Module</b>		<b>Credit Number<sup>5</sup></b>	<b>Total Student Effort Module (hours)</b>						<b>Allocation Of Marks (from the module assessment strategy)</b>					
		<b>Status</b>	<b>NFQ Level<sup>1</sup> where specified</b>	<b>Credit Units</b>	<b>Hours Total</b>	<b>Contact</b>	<b>Class (or equiv)</b>	<b>learning e-</b>	<b>Directed Learning</b>	<b>Independent</b>	<b>Hours of learning based</b>	<b>Work-based</b>	<b>C.A. %</b>	<b>% Supervised Project</b>	<b>Proctored practical demonstr</b>	<b>Proctored written exam %</b>
				ECTS												
Statistics for Data Analytics	1	M	9	10	250	48		202				35				65
Database and Analytics Programming	1	M	9	10	250	48		202				30	70			
Data Mining and Machine Learning I	2	M	9	5	125	48		77				100				
Business Intelligence and Business Analytics	2	E	9	5	125	36		89				100				
Data Intensive Architectures	2	E	9	5	125	48		77				100				
Innovation I	2	E	9	5	125	36		89				100				
Modelling, Simulation, and Optimization	2	M	9	10	250	48		202				60				40
Data Mining and Machine Learning II	3	M	9	10	250	48		202				50				50
Research In Computing	3	M	9	5	125	36		89				100				
Domain Applications of Predictive Analytics	3	E	9	5	125	36		89				100				
Scalable Systems Programming	3	E	9	5	125	48		77				50				50
Innovation II	3	E	9	5	125	36		89				100				
Data Governance and Ethics	4	M	9	5	100	30		70				100				
Research Project	4	M	9	10	600	12		588					100			
<b>Special Regulations</b> (Up to 280 characters): Availability of elective modules will be conditional on i) timetable arrangements, and ii) that the number of students electing to take the module exceeds a given minimum number. In both semester 2 and semester 3, learners must complete an elective module (or elective modules) that account for 10 ECTS credits per semester. A student must pass Research in Computing and not repeat more than 10 ECTS credits to be eligible to register for the Research Project elective. In semester 3, learners must complete and pass either the Research Project.																



## PGDip in Data Analytics (Full-time Delivery Schedule)

<b>Name of Provider:</b>		<b>National College of Ireland</b>																	
<b>Programme Title</b>		Postgraduate Diploma in Science in Data Analytics																	
<b>Award Title</b>		Postgraduate Diploma in Science in Data Analytics																	
<b>Stage Exit Award Title<sup>3</sup></b>																			
<b>Modes of Delivery (FT/PT):</b>		FT																	
<b>Teaching and learning modalities</b>		Direct contact via lectures and demonstrations, Blended e-learning																	
<b>Award Class<sup>4</sup></b>	<b>Award NFQ level</b>	<b>Award EQF Level</b>	<b>Stage (1, 2, 3, 4, ..., or Award Stage):</b>	<b>Stage NFQ Level<sup>2</sup></b>	<b>Stage EQF Level<sup>2</sup></b>	<b>Stage Credit (ECTS)</b>	<b>Date Effective</b>	<b>ISCED code</b>	<b>Subject</b>										
Major	9	7	Award	9	7	60	Sept 2019	0610											
<b>Module Title</b> (Up to 70 characters including spaces)		<b>Semester no where applicable. (Semester 1 or Semester2)</b>	<b>Module</b>		<b>Credit Number<sup>5</sup></b>	<b>Total Student Effort Module (hours)</b>						<b>Allocation Of Marks (from the module assessment strategy)</b>							
			<b>Status</b>	<b>NFQ Level<sup>1</sup> where specified</b>	<b>Credit Units</b>	<b>Hours Total</b>	<b>Contact</b>	<b>Class (or equiv)</b>	<b>learning e-</b>	<b>Directed Learning</b>	<b>Independent</b>	<b>Hours of learning based</b>	<b>Work-</b>	<b>C.A. %</b>	<b>% Project Supervise d</b>	<b>Proctore d practical demonstr</b>	<b>Proctore d written exam %</b>		
					ECTS														
Statistics for Data Analytics		1	M	9	10	250	48		202			35							65
Database and Analytics Programming		1	M	9	10	250	48		202			30	70						
Data Mining and Machine Learning I		1	M	9	5	125	48		77			100							
Business Intelligence and Business Analytics		1	E	9	5	125	36		89			100							
Data Intensive Architectures		1	E	9	5	125	48		77			100							
Innovation I		1	E	9	5	125	36		89			100							
Modelling, Simulation, and Optimization		2	M	9	10	250	48		202			60							40
Data Mining and Machine Learning II		2	M	9	10	250	48		202			50							50
Data Governance and Ethics		2	M	9	5	100	30		70			100							
Domain Applications of Predictive Analytics		2	E	9	5	125	36		89			100							
Scalable Systems Programming		2	E	9	5	125	48		77			50							50
Innovation II		2	E	9	5	125	36		89			100							
<b>Special Regulations</b> (Up to 280 characters): Availability of elective modules will be conditional on i) timetable arrangements, and ii) that the number of students electing to take the module exceeds a given minimum number. In both semester 1 and semester 2, learners must complete an elective module (or elective modules) that account for 10 ECTS credits ( 5 ECTS per semester).																			

## PGDip in Data Analytics (Part-time Delivery Schedule)

<b>Provider:</b>		<b>College of Ireland</b>																
<b>Programme Title</b>		Postgraduate Diploma in Science in Data Analytics																
<b>Award Title</b>		Postgraduate Diploma in Science in Data Analytics																
<b>Stage Exit Award Title<sup>3</sup></b>																		
<b>Modes of Delivery (FT/PT):</b>		<b>PT</b>																
<b>Teaching and learning modalities</b>		Direct contact via lectures and demonstrations, Blended e-learning																
<b>Award Class<sup>4</sup></b>	<b>Award NFQ level</b>	<b>Award EQF Level</b>	<b>Stage (1, 2, 3, 4, ..., or Award Stage):</b>	<b>Stage NFQ Level<sup>2</sup></b>	<b>Stage EQF Level<sup>2</sup></b>	<b>Stage Credit (ECTS)</b>	<b>Date Effective</b>	<b>ISCED code</b>	<b>Subject</b>									
Major	9		Award	9		60	Sept 2019											
<b>Module Title</b> (Up to 70 characters including spaces)	<b>Semester no where applicable. (Semester 1 or Semester2)</b>	<b>Module</b>		<b>Credit Number<sup>5</sup></b>	<b>Total Student Effort Module (hours)</b>						<b>Allocation Of Marks (from the module assessment strategy)</b>							
		<b>Status</b>	<b>NFQ Level<sup>1</sup> where specified</b>	<b>Credit Units</b> ECTS	<b>Total Hours</b>	<b>Contact</b>	<b>Class (or equiv)</b>	<b>learning e-</b>	<b>Directed Learning</b>	<b>Independent</b>	<b>Hours of learning</b>	<b>Work-based</b>	<b>Work-based</b>	<b>C.A. %</b>	<b>Supervised Project</b>	<b>Practical demonstr</b>	<b>Proctored exam %</b>	<b>Proctored written</b>
Statistics for Data Analytics	1	M	9	10	250	48		202					35					65
Database and Analytics Programming	1	M	9	10	250	48		202					30	70				
Data Mining and Machine Learning I	2	M	9	5	125	48		77					100					
Business Intelligence and Business Analytics	2	E	9	5	125	36		89					100					
Data Intensive Architectures	2	E	9	5	125	48		77					100					
Innovation I	2	E	9	5	125	36		89					100					
Modelling, Simulation, and Optimization	2	M	9	10	250	48		202					60					40
Data Mining and Machine Learning II	3	M	9	10	250	48		202					50					50
Data Governance and Ethics	3	M	9	5	100	30		70					100					
Domain Applications of Predictive Analytics	3	E	9	5	125	36		89					100					
Scalable Systems Programming	3	E	9	5	125	48		77					50					50
Innovation II	3	E	9	5	125	36		89					100					
<b>Special Regulations</b> (Up to 280 characters): Availability of elective modules will be conditional on i) timetable arrangements, and ii) that the number of students electing to take the module exceeds a given minimum number. In both semester 2 and semester 3, learners must complete an elective module (or elective modules) that account for 10 ECTS credits per semester.																		