



Qualification Specification for:

OCN NI Level 2 Award in Geographical Information Systems

➤ **Qualification No: 601/6605/8**

OCN NI Level 3 Award in Geographical Information Systems

➤ **Qualification No: 601/6606/X**

Qualification Regulation Information

OCN NI Level 2 Award in Geographical Information Systems

Qualification Number:	601/6605/8
Operational start date:	01 August 2015
Operational end date:	31 July 2029
Certification end date:	31 July 2031

OCN NI Level 3 Award in Geographical Information Systems

Qualification Number:	601/6606/X
Operational start date:	01 August 2015
Operational end date:	31 July 2025
Certification end date:	31 July 2028

Qualification operational start and end dates indicate the lifecycle of a regulated qualification. The operational end date is the last date by which learners can be registered on a qualification and the certification date is the last date by which learners can claim their certificate.

All OCN NI regulated qualifications are published to the Register of Regulated Qualifications (<http://register.ofqual.gov.uk/>). This site shows the qualifications and awarding organisations regulated by CCEA Regulation and Ofqual.

OCN NI Contact Details

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Foreword

This document explains OCN NI's requirements for the delivery and assessment of the following regulated qualifications:

- **OCN NI Level 2 Award in Geographical Information Systems**
- **OCN NI Level 3 Award in Geographical Information Systems**

This specification sets out:

- Qualification features
- Centre requirements for delivering and assessing the qualification
- The structure and content of the qualification
- Unit details
- Assessment requirements for the qualification
- OCN NI's quality assurance arrangements for the qualification
- Administration

OCN NI will notify centres in writing of any major changes to this specification. We will also publish changes on our website at www.ocnni.org.uk

This specification is provided online, so the version available on our website is the most up to date publication. It is important to note that copies of the specification that have been downloaded and printed may be different from this authoritative online version.

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About Regulation

OCN NI

Open College Network Northern Ireland (OCN NI) is a regulated Awarding Organisation based in Northern Ireland. OCN NI is regulated by CCEA Regulation to develop and award professional and technical (vocational) qualifications from Entry Level up to and including Level 5 across all sector areas. In addition, OCN NI is regulated by Ofqual to award similar qualification types in England.

The Regulated Qualifications Framework: an overview

The Regulated Qualifications Framework (RQF) was introduced on 1st October 2015: the RQF provides a single framework for all regulated qualifications.

Qualification Level

The level indicates the difficulty and complexity of the knowledge and skills associated with any qualification. There are eight levels (Levels 1-8) supported by three 'entry' levels (Entry 1-3).

Qualification Size

Size refers to the estimated total amount of time it could typically take to study and be assessed for a qualification. Size is expressed in terms of Total Qualification Time (TQT), and the part of that time typically spent being taught or supervised, rather than studying alone, is known as Guided Learning Hours (GLH).

Qualification Summary

A geographic information system (GIS) is a computer system to map, model, query and analyse large quantities of data within a single database according to location. It gives the power to create maps, integrate information, present powerful ideas and develop effective solutions by bringing together information from multiple sources.

The OCN NI Geographical Information Systems Qualifications will help increase awareness of GIS among the business sector. Learners will understand the importance of location and how it can economically enhance businesses. Learners will also realise how the benefits of GIS such as informed decision making can increase profitability and efficiency of businesses.

Sector Subject Area

6.2 ICT for users

Grading

Grading for these qualifications is pass/fail.

Entry Requirements

To register for the OCN NI Level 2 Award in Geographical Information Systems or the OCN NI Level 3 Award in Geographical Information Systems learners should be at least 16 years old. Learners should also be able to use MS Excel or similar software.

It is expected that each learner will receive appropriate advice and guidance regarding the suitability of the qualification and the pathway through the qualification suite in order to achieve their expected outcomes.

Qualification Target Group

The qualifications are targeted at those with relevant IT skills who wish to learn how to maximise the use of data which has a location. The qualification is useful for those involved in common business practices such as decision making, problem solving, data analysis and presentation of information.

Progression Opportunities

The OCN NI Level 2 Award in Geographical Information Systems Qualification enables progression to Level 3. The Level 3 qualification in GIS is a strong foundation for anyone planning to undertake a Higher Level qualification which involves a GIS element, such as a Degree in Environmental Science, Geography, Planning and Property Development, Property, Investment, Appraisal and Development, Transport Logistics or Civil Engineering. This qualification would also prepare learners for a postgraduate qualification in GIS, depending on the individual's capability and experience.

Qualification Support

A Qualification Support pack is available for OCN NI centres within the login area of the OCN NI website (<https://www.ocnni.org.uk/my-account/>), which includes additional support for teachers, eg planning and assessment templates, guides to best practice, etc.

Delivery Languages

These qualifications are available in English only at this time. If you wish to offer these qualifications in Welsh or Irish (Gaeilge) then please contact OCN NI who will review demand and provide as appropriate.

Centre Requirements for Delivering the Qualification

Centre Recognition and Qualification Approval

New and existing OCN NI recognised centres must apply for and be granted approval to deliver the qualification prior to the commencement of delivery.

Centre Staffing

Centres are required to have the following roles in place as a minimum, although a member of staff may hold more than one role*:

- Centre contact
- Programme Co-ordinator
- Tutor
- Assessor
- Internal Verifier

*Note: A person cannot be an internal verifier for their own assessments.

Tutors

Tutors delivering the qualification should be occupationally competent, qualified to at least one level higher than the qualification and have a minimum of one year's experience in the area of geographical information systems.

Assessors

The qualifications are assessed within the centre and are subject to OCN NI's quality assurance processes. Units are achieved through internally set, internally assessed, and internally verified evidence.

Assessors must:

- be occupationally competent, qualified to at least one level higher than the qualification and have a minimum of one year's relevant experience in the area of geographical information systems
- have a minimum of one year's experience in the area they are assessing
- have direct or related relevant experience in assessment
- assess all assessment tasks and activities

Internal Verification

OCN NI qualifications must be scrutinised through the centre's internal quality assurance processes as part of the recognised centre agreement with OCN NI. The centre must appoint an experienced and trained centre internal verifier whose responsibility is to act as the internal quality monitor for the verification of the delivery and assessment of the qualifications.

The centre must agree a working model for internal verification with OCN NI prior to delivery of the qualifications.

Internal Verifiers must:

- have at least one year's occupational experience in the areas they are internally verifying
- attend OCN NI's internal verifier training

Internal verifiers are required to:

- support tutors and assessors
- sample assessments according to the centre's sampling strategy
- ensure tasks are appropriate to the level being assessed
- maintain up-to-date records supporting the verification of assessment and learner achievement

Structure and Content

OCN NI Level 2 Award in Geographical Information Systems

In order to achieve this qualification, learners must successfully complete the one mandatory unit containing 2 credits.

Total Qualification Time (TQT) for this qualification: 20 hours

Guided Learning Hours (GLH) for this qualification: 16 hours

Unit Reference Number	OCN NI Unit Code	Unit Title	TQT	Credit Value	GLH	Level
Group A (Mandatory Group)						
L/507/4038	CBC764	Introduction to Geographical Information Systems	20	2	16	Two

OCN NI Level 3 Award in Geographical Information Systems

In order to achieve the qualification, learners must successfully complete a minimum of 12 credits including both mandatory units (8 credits) plus a minimum of 4 credits from the optional units.

Total Qualification Time (TQT) for this qualification: 120 hours

Guided Learning Hours (GLH) for this qualification: 90 hours

Unit Reference Number	OCN NI Unit Code	Unit Title	TQT	Credit Value	GLH	Level
Group A (Mandatory Units)						
R/507/4042	CBC768	Introduction to Geographical Information Systems	40	4	30	Three
Y/507/4043	CBC769	Using Geographical Information Systems to Inform the Decision Making Process	40	4	30	Three

Group B (Optional Units)						
R/507/4039	CBC765	Economics, Location and Geographical Information Systems	40	4	30	Three
L/507/4041	CBC767	Geographical Information Systems Data Manipulation and Presentation	40	4	30	Three
J/507/4040	CBC766	Geographical Information Systems Analysis to Inform Planning	30	3	21	Three

Unit Details

Title	Introduction to Geographical Information Systems	
Level	Two	
Credit Value	2	
Guided Learning Hours (GLH)	16	
OCN NI Unit Code	CBC764	
Unit Reference No	L/507/4038	
<i>Unit purpose and aim(s):</i> This unit will enable the learner to gain an understanding of geographical information systems (GIS).		
Learning Outcomes		Assessment Criteria
1. Understand the concept of GIS.	1.1. Define GIS and describe how GIS may be used in industry. 1.2. Identify sources of information for use in GIS.	
2. Understand the basic principles of projections and coordinates.	2.1. Describe what coordinates are. 2.2. Identify various projections and describe their purpose.	
3. Know how to present simple geographic data online.	3.1. Demonstrate how to present simple geographical data online.	
Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
Practical demonstration/assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary

Title	Introduction to Geographical Information Systems	
Level	Three	
Credit Value	4	
Guided Learning Hours (GLH)	30	
OCN NI Unit Code	CBC768	
Unit Reference No	R/507/4042	
<i>Unit purpose and aim(s):</i> This unit will enable learners to understand the concept of Geographical Information Systems (GIS), data representation including GIS output. The learner will also understand the principles of projections and coordinates.		
Learning Outcomes		Assessment Criteria
1. Understand the concept of GIS.	1.1. Describe GIS and how it may be used within a business environment. 1.2. Identify sources of information and explain how they may be used in GIS. 1.3. Demonstrate how data may be prepared, stored and analysed in a GIS setting.	
2. Understand ways in which geographical data may be represented and presented.	2.1. Identify types of data relating to GIS. 2.2. Explain the difference between raster and vector data. 2.3. Produce an output that adheres to common map conventions.	
3. Understand the basic principles of projections and coordinates.	3.1. Outline various projections and coordinate reference systems. 3.2. Explain what coordinates are and show how they are mapped.	
Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
Practical demonstration /assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary

Title	Using Geographical Information Systems to Inform the Decision Making Process	
Level	Three	
Credit Value	4	
Guided Learning Hours (GLH)	30	
OCN NI Unit Code	CBC769	
Unit Reference No	Y/507/4043	
<i>Unit purpose and aim(s):</i> This unit will enable learners to use Geographical Information Systems (GIS), to evaluate different marketing strategies/models within a business context.		
Learning Outcomes		Assessment Criteria
1. Know how to use GIS to assist with the development of marketing strategies.	1.1. Interpret GIS outputs to identify target audiences by geographical location. 1.2. Use GIS outputs to differentiate between existing and potential markets.	
2. Understand how GIS can assist decision making in business.	2.1. Analyse the potential profitability of a business service using GIS. 2.2. Demonstrate the ability to select appropriate sites for a business using GIS. 2.3. Explain how information from GIS can assist a business with the management of resources.	
3. Understand market modelling.	3.1. Summarise and perform an example of how GIS is used for market modelling. 3.2. Demonstrate how GIS may be used to create a range of outputs for market modelling.	
Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
Practical demonstration /assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary

Title	Economics, Location and Geographical Information Systems	
Level	Three	
Credit Value	4	
Guided Learning Hours (GLH)	30	
OCN NI Unit Code	CBC765	
Unit Reference No	R/507/4039	
<i>Unit purpose and aim(s):</i> This unit will enable learners to interpret Geographical Information Systems (GIS) output, evaluate demand forecasting and to explain GIS techniques within an economical and location context.		
Learning Outcomes	Assessment Criteria	
1. Understand the importance of location.	1.1. Identify types of information relating to locations which may assist in the decision making process. 1.2. Provide an interpretation of GIS outputs relating to given locations.	
2. Know how GIS relates to basic economics.	2.1. Demonstrate how GIS may assist with the review of demand and supply. 2.2. Use GIS to identify potential business competitors. 2.3. Identify and use suitable economic data within GIS to support decision making.	
3. Know which skills and methods are used to analyse relationships of economics and location.	3.1. Explain GIS techniques which may be used to analyse the relationship between economics and location. 3.2. Present GIS outputs in a format representative of a business report. 3.3. Critically evaluate the use of GIS in assisting with problem solving within a business setting.	
Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
Practical demonstration /assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary

Title	Geographical Information Systems Data Manipulation and Presentation	
Level	Three	
Credit Value	4	
Guided Learning Hours (GLH)	30	
OCN NI Unit Code	CBC767	
Unit Reference No	L/507/4041	
<i>Unit purpose and aim(s):</i> This unit will enable learners to develop an understanding of database structure, information integrity and how to connect to GIS servers. The learner will critically evaluate and present Geographical Information Systems (GIS) data.		
Learning Outcomes	Assessment Criteria	
1. Understand the structure of databases.	1.1. Create a database using GIS data and apply queries. 1.2. Perform manipulation of a database in order to present required GIS information.	
2. Know how to connect to other available database sources.	2.1. Describe how to connect to an external database and GIS server. 2.2. Demonstrate how to display and manipulate data from an external database in GIS. 2.3. Demonstrate how data from an external database can be used in GIS to create an output.	
3. Know how to present the outcome of queries online.	3.1. Demonstrate how information obtained from a user's GIS query may be presented online. 3.2. Critically evaluate the ability to present GIS data to assist understanding.	
Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
Practical demonstration /assignment	A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge	Record of observation Learner notes/written work Learner log
Coursework	Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course	Record of observation Learner notes/written work Tutor notes/record Learner log/diary

Title	Geographical Information Systems Analysis to Inform Planning	
Level	Three	
Credit Value	3	
Guided Learning Hours (GLH)	21	
OCN NI Unit Code	CBC766	
Unit Reference No	J/507/4040	
<i>Unit purpose and aim(s):</i> This unit will enable learners to gain an understanding of how Geographical Information Systems (GIS) may be used to inform planning.		
Learning Outcomes		Assessment Criteria
1. Understand how GIS may be used to inform planning.	1.1. Describe how GIS may be used to inform planning. 1.2. Demonstrate how GIS may be used within a planning scenario. 1.3. Produce a range of outputs that may be used in the planning process.	
2. Understand various datasets that may be used in planning.	2.1. Identify types of data that may be used in GIS and planning. 2.2. Use existing data to enhance GIS analysis.	
3. Know how to create data to be used in the planning process.	3.1. Produce various bespoke datasets for a planning process. 3.2. Use newly created data for an environmental impact assessment.	
Assessment Guidance		
The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.		
Assessment Method	Definition	Possible Content
Portfolio of evidence	A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes OR A collection of documents containing work that shows the learner's progression through the course	Learner notes/written work Learner log/diary Peer notes Record of observation Record of discussion
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Quality Assurance of Centre Performance

External Verification

All OCN NI recognised centres are subject to External Verification. External verification visits and monitoring activities will be conducted annually to confirm continued compliance with the conditions of recognition, review the centre's risk rating for the qualifications and to assure OCN NI of the maintenance of the integrity of the qualifications.

The External Verifier will review the delivery and assessment of the qualifications. This will include the review of a sample of assessment evidence and evidence of the internal verification of assessment and assessment decisions. This will form the basis of the EV report and will inform OCN NI's annual assessment of centre compliance and risk. The External Verifier is appointed by OCN NI.

Standardisation

As a process, standardisation is designed to ensure consistency and promote good practice in understanding and application of standards. Standardisation events:

- make qualified statements about the level of consistency in assessment across centres delivering a qualification
- make statements on the standard of evidence that is required to meet the assessment criteria for units in a qualification
- make recommendations on assessment practice
- produce advice and guidance for the assessment of units
- identify good practice in assessment and internal verification

Centres offering units of an OCN NI qualification must attend and contribute assessment materials and learner evidence for standardisation events if requested.

OCN NI will notify centres of the nature of sample evidence required for standardisation events (this will include assessment materials, learner evidence and relevant assessor and internal verifier documentation). OCN NI will make standardisation summary reports available and correspond directly with centres regarding event outcomes.

Administration

Registration

A centre must register learners within 20 working days of commencement of a qualification.

Certification

Certificates will be issued to centres within 20 working days of receipt of correctly completed results marksheets. It is the responsibility of the centre to ensure that certificates received from OCN NI are held securely and distributed to learners promptly and securely.

Charges

OCN NI publishes all up to date qualification fees in its Fees and Invoicing Policy document. Further information can be found on the centre login area of the OCN NI website.

Equality, Fairness and Inclusion

OCN NI has considered the requirements of equalities legislation in developing the specification for these qualifications. For further information and guidance relating to access to fair assessment and the OCN NI Reasonable Adjustments and Special Considerations policies, centres should refer to the OCN NI website.

Retention of Evidence

OCN NI has published guidance for centres on the retention of evidence. Details are provided in the OCN NI Centre Handbook and can be accessed via the OCN NI website.

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OCN NI Level 3 Award in Geographical Information Systems

Qualification Number: 601/6606/X

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