This document provides a concise summary of the main features of the course(s) & associated award(s) offered through this Programme Specification, and includes the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities provided. More detailed information on the learning outcomes, curriculum content, teaching/learning, assessment methods for each unit and on the Programme’s relationship to QAA Subject Benchmark Statements may be found in the dedicated student handbook for the Programme. The accuracy of the information in this document is reviewed periodically by the University and may be subject to verification by the Quality Assurance Agency for Higher Education.
Versioning of Programme Specification

This programme specification is valid for the period of approval confirmed at the time of the approval/last review event and relates to provision approved at that point. Programme specifications are updated on an annual basis to include modifications approved through the University's quality assurance processes.

This version provides a description of the programme as approved for the academic session indicated in section 3 of the following table.

<table>
<thead>
<tr>
<th></th>
<th>Date of initial Approval or last review:</th>
<th>12 January 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Effective date of Approved/Reviewed Programme Specification:</td>
<td>1 September 2017 – 31 August 2023</td>
</tr>
<tr>
<td>3</td>
<td>This Version effective from:</td>
<td>1 September 2017</td>
</tr>
<tr>
<td>4</td>
<td>Version number:</td>
<td>2017/Version 7</td>
</tr>
</tbody>
</table>

Students who commenced their study on awards within this programme specification prior to 1 September 2017 should refer to the previous version of the programme specification published on the CASQE website.

Modifications to Programme Specification

Modifications to the programme specification since approval/last review, and the cohort of students affected by the change, are listed in Section H (Log of Modifications) at the back of the document.

Cross Referencing of Programme Specifications

<table>
<thead>
<tr>
<th>The following elements of provision included in this document is/are also included in the following programme specifications</th>
<th>Award</th>
<th>Programme Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSc/PgD/PgCert Geographical Information Systems</td>
<td>Distance Learning Postgraduate GIS Network (UNIGIS) Programme Specification 2016-17</td>
<td></td>
</tr>
<tr>
<td>MSc/PgD Applied Geographical Information Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSc/PgD Geographical Information Technologies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Amendments made to provision listed in this table, must also be reflected in the relevant programme specifications listed above.
Programme Specification

The information in this document is organised into the following sections:
Section A – Administrative and Regulatory Information
Section B – Outcomes
Section C – Structure
Section D – Teaching, Learning and Assessment
Section E – Programme Management
Section F – Mapping
Section G – Log of Modifications

SECTION A – ADMINISTRATIVE AND REGULATORY INFORMATION

1. Overarching Programme Specification Title
   Distance Learning Postgraduate GIS Network (UNIGIS)

2. Brief Summary
   UNIGIS is a Distance Learning Postgraduate Network in Geographical Information Systems (GIS) jointly run by Manchester Metropolitan University (Manchester Met) and the University of Salford (UoS). The UNIGIS network has over 25 years' experience of success in delivering GIS postgraduate courses. Our programme is designed to meet the needs of professionals working in the GI industry - or those wishing to enter the sector who want to acquire education through online distance learning. UNIGIS promotes active learning and aims to provide a deeper and more balanced education in GIS than would be provided by software training alone. UNIGIS offers three separate pathways at Master’s level including Geographical Information Systems, Applied Geographical Information Systems, and Geographical Information Technologies.

3. Awarding institutions
   Manchester Metropolitan University (Manchester Met)
   University of Salford (UoS)

4. Home Faculty
   Science & Engineering (Manchester Met)

5. Home Department/ School/ Institute
   Division of Geography & Environmental Management / School of Science & the Environment / Manchester Met
   School of Environment & Life Sciences / UoS

6. UCAS/UTT code(s)
   N/A

7. Framework for HE Qualifications position of final award(s)
   Masters (Level 7)

8. Alignment with University Curriculum Framework
   Postgraduate
## Engagement with the University-wide provision (eg Uniwide Language, EdLab)

- Uniwide is not currently available for distance learning postgraduate programmes

## Compliance with University Assessment Regulations

*University Assessment Regulations*

### Approved Variations/Exemptions from University Assessment Regulations

*University Assessment Regulations*

### Relationship with Faculty Foundation Year

N/A

## Awards

### Final award title(s)

- PG Cert Geographical Information Systems
- PG Dip Geographical Information Systems
- MSc Geographical Information Systems
- PG Dip Applied Geographical Information Systems
- MSc Applied Geographical Information Systems
- PG Dip Geographical Information Technologies
- MSc Geographical Information Technologies

## Combined Honours

There is no Combined Honours provision within this programme specification

### Combined Honours Awards available eg:

- BSc/BA (Hons) AB
- BSc/BA (Hons) AB and XY
- BSc/BA (Hons) AB with XY

### Single Honours Awards available through Combined Honours (ie Named Awards)

### Approved Subject Combinations administered by this Programme Specification (ie “home” combinations)

### Approved Combination

- Home Programme Specification & Home Dept
### Interim exit awards and Subject title(s)

- PG Cert Geographical Information Systems
- PG Dip Geographical Information Systems
- PG Dip Applied Geographical Information Systems
- PG Dip Geographical Information Technologies

### Arrangements with Partners

<table>
<thead>
<tr>
<th>16</th>
<th>Approved Collaborative partner(s)</th>
<th>Partner Name</th>
<th>Type of Collaborative Partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>University of Salford (UoS)</td>
<td>Jointly delivered programme</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17</th>
<th>Articulation Arrangements with Partners</th>
<th>Partner Name</th>
<th>Details of Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N/A</td>
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</tr>
</tbody>
</table>

### Professional, Statutory and Regulatory Bodies

<table>
<thead>
<tr>
<th>18</th>
<th>PSRB(s) associated with final award of any route within the programme specification</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Date, outcome &amp; period of approval of last PSRB approval/accreditation</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Approval Status

<table>
<thead>
<tr>
<th>20</th>
<th>Date and period of approval of most recent Manchester Met review/ approval</th>
<th>(i) Date of Latest review/approval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>12 January 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) Length &amp; Dates of Period of approval given in (i) above:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Years: 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>From: September 2017</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To: August 2023</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) Major Modifications to Programme Specification since last review/approval</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>21</th>
<th>Next Scheduled Review Date:</th>
<th>2022/23</th>
</tr>
</thead>
</table>
SECTION B – OUTCOMES

23 Manchester Met Graduate Outcomes

On successful completion of their course of study graduates will be able to:

GO1. apply skills of critical analysis to real world situations within a defined range of contexts;
GO2. demonstrate a high degree of professionalism characterised by initiative, creativity, motivation and self-management;
GO3. express ideas effectively and communicate information appropriately and accurately using a range of media including ICT;
GO4. develop working relationships using teamwork and leadership skills, recognising and respecting different perspectives;
GO5. manage their professional development reflecting on progress and taking appropriate action;
GO6. find, evaluate, synthesise and use information from a variety of sources;
GO7. articulate an awareness of the social and community contexts within their disciplinary field.

24 Programme Rationale

The UNIGIS programme was originally developed to meet a very specific need within the Geographical Information (GI) industry for formal academic training and qualifications to support professionals already working in (and those wishing to move into) the industry sector. Many people in this position require recognised qualifications to help with career progression/entry, but for a multitude of reasons (e.g. circumstances, finance, employment) have been unable to take time out of their career to study full-time in traditional face-to-face mode. At the outset of UNIGIS, there were relatively few HEIs delivering GIS education within the UK, and none offered distance learning provision.

UNIGIS has been at the forefront of distance learning education in GIS for over 25 years. Today, the programme still has the same vital concepts and operational function offering specialist academic provision for people already working in, or wishing to enter, the GIS profession. The content and delivery of the programme continues to develop apace with the dynamics of the GI industry (e.g. advent of webGIS, and growing requirements for programming skills) and technological advances in online and distance education provision (e.g. adoption of VLEs and use of online communication tools).

UNIGIS is distinctive as one of the leading UK providers of distance-based GIS education, drawing upon a relatively large academic staff base (10 lecturers) across two HEIs and offering a wide ranging and professionally-focused MSc programme. In addition, UNIGIS UK is a member of the UNIGIS International Association (www.unigis.net) – a global network of HEIs – which is at the forefront of online and distance GIS education.
At present, there are no benchmarks available for GIS postgraduate provision, although the programme aligns to the specialised or advanced study master’s degree as defined by the QAA (2015) in their Master’s Degree Characteristics Statement and the FHEQ (2008) descriptors for Level 7 qualifications.

**QAA (2015) Master’s Degree Characteristics Statement**

Two-thirds of the programme is taught (120 credits), with one third of the programme (60 credits) devoted to a research project. All students progressing to the Master’s project will receive training in research methods (within the spatial sciences).

**Descriptors for a higher education qualification at level 7: Master’s degree**

The programme design is in line with the FHEQ (2008) level 7 descriptors and these are adapted below to reflect and align with the programme content:

- The systematic understanding of domain-specific knowledge in GIS
- Awareness of contemporary issues and problems in GIS
- Competency in the application of GIS techniques for research
- Practical understanding of spatial research and enquiry techniques for discipline-based knowledge creation and interpretation
- Demonstrate advanced levels of scholarship and critical evaluation of existing GIS (research) methodologies
- Ability to deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate conclusions clearly to specialist and non-specialist audiences
- Demonstrate self-direction and originality in tackling and solving problems using GIS and related technologies, and act autonomously in planning and implementing tasks at a professional or equivalent level (through the research dissertation)
- Continue to advance their knowledge and understanding of GIS, and to develop new skills to a high level

Where appropriate, the programme also draws upon the University Consortium for Geographical Information Science’s Body of Knowledge (BOK) – a model curricula initiative from the United States of America – which is an inventory of knowledge domains for geographical information science. Rather than present a definitive curriculum, the BOK provides a useful reference framework for study programmes in GIS & Technology.

**Programme Specific Outcomes**

**Final Award Learning Outcomes**

On successful completion of MSc Geographical Information Systems, students will be able to:

PLO1. Systematically evaluate the principles and methods that underpin the development of a GIS solution
PLO2. Synthesise and evaluate the interactions between data, methods and technology and the impact and constraints they place on applications of GIS

PLO3. Analyse and evaluate the benefits and challenges presented by the implementation of GIS

PLO4. Appraise the technical issues in the development of GIS applications

PLO5. Plan, design, implement and evaluate appropriate methodologies for GIS applications

PLO6. Design and implement a small-scale GIS research application

On successful completion of MSc Applied Geographical Information Systems, students will be able to:

PLO1. Summarise the characteristics and justify the selection of different GIS methods for monitoring human and natural environments

PLO2. Systematically illustrate the principles of information extraction from social/human, environmental and/or remotely sensed data sources

PLO3. Summarise and interpret the spatial interaction of social/human and environmental factors

PLO4. Systematically evaluate the benefits and challenges of using GIS for a variety of social/human and/or environmental applications

PLO5. Plan, design, implement and evaluate appropriate methodologies to analyse social/human and/or environmental problems using GIS

PLO6. Formulate social/human and/or environmental information from appropriate sources, such as census and remotely sensed data, and evaluate methods for integrating this into GIS

PLO7. Design spatial data models, well-formed databases, data acquisition strategies and spatial data analysis strategies in order to implement a GIS research application effectively

On successful completion of MSc Geographical Information Technologies, students will be able to:

PLO1. Summarise and demonstrate the software engineering practices underlying GIS software development

PLO2. Systematically explain and evaluate the principles and methods that underpin the development of distributed GIS (web-based) applications and data services

PLO3. Evaluate the benefits and challenges of modern geo-database technologies and their implementation in a distributed environment (e.g. web or enterprise)

PLO4. Compose a small-scale desktop GIS application using an appropriate programming language
### PLO5. Plan, design, implement and evaluate appropriate methodologies to create geospatial applications in a distributed environment (e.g. web mapping application)

### PLO6. Design and implement a small-scale Geographical Information Technology research application

(b) **Combined Honours Learning Outcomes**

Not applicable for this programme.

(c) **Pass Degree Learning Outcomes**

Not applicable for this programme.

### 27 Interim Award Learning Outcomes

On successful completion of a **PG Cert Geographical Information Systems**, students will be able to:

PLO1. Evaluate the components that comprise the fields of Geographical Information Systems and Science, and employ that knowledge to critique different approaches to the application of contemporary GIS

PLO2. Apply spatial data models and advanced spatial data operations to implement analysis strategies for different GIS applications

PLO3. Design and implement database models using appropriate relational database software, and be able to assess the limitations of conventional database technologies for spatial data storage

PLO4. Evaluate spatial data infrastructures, their impact on spatial data and metadata capture, and the importance of national and international standards for geographical information

PLO5. Systematically evaluate the breadth of spatially-referenced scientific and social science knowledge, and communicate the results of such assessments, using effective visual and written skills

PLO6. Evaluate spatial data model design, database technology, data quality, and spatial operations to evaluate the outcomes of GIS decision-making

PLO7. Apply current industry standard GIS and database software to solve spatial decision-making problems

On successful completion of a **PG Dip Geographical Information Systems**, students will be able to:

PLO1. Systematically evaluate the principles and methods that underpin the development of a GIS solution
PLO2. Synthesize and evaluate the interactions between data, methods and technology and the impact and constraints they place on applications of GIS

PLO3. Analyse and evaluate the benefits and challenges presented by the implementation of GIS

PLO4. Appraise the technical issues in the development of GIS applications

PLO5. Plan, design, implement and evaluate appropriate methodologies for GIS applications

On successful completion of a **PG Dip Applied Geographical Information Systems**, students will be able to:

PLO1. Summarise and construct different GIS methods for monitoring human and natural environments

PLO2. Systematically illustrate the principles of information extraction from social/human, environmental and/or remotely sensed data sources

PLO3. Summarise and interpret the spatial interaction of social/human and environmental factors

PLO4. Systematically evaluate the benefits and challenges of using GIS for a variety of social/human and/or environmental applications

PLO5. Plan, design, implement and evaluate appropriate methodologies to analyse social/human and/or environmental problems using GIS

PLO6. Produce social/human and/or environmental information from appropriate sources, such as census and remotely sensed data, and evaluate methods for integrating this into GIS

On successful completion of a **PG Dip Geographical Information Technologies**, students will be able to:

PLO1. Summarise and demonstrate the software engineering practices underlying GIS software development

PLO2. Systematically explain and evaluate the principles and methods that underpin the development of distributed GIS (web-based) applications and data services

PLO3. Evaluate the benefits and challenges of modern geo-database technologies and their implementation in a distributed environment (e.g. web or enterprise)

PLO4. Develop and construct a small-scale desktop GIS application using an appropriate programming language

PLO5. Plan, design, implement and evaluate appropriate methodologies to create geospatial applications in a distributed environment (e.g. web mapping application)
SECTION C – STRUCTURE

| 28 | Structures, modes of delivery (eg FT/PT/DL etc), levels, credits, awards, curriculum map of all units (identifying core/option status, credits, pre or co-requisites) potential entry/exit points and progression/award requirements |

OPTION UNITS
Option units listed in the following curriculum structures are all approved for delivery but may not all run in any one academic session.

MSc Geographical Information Systems (Part-time by Distance Learning)

POSTGRADUATE

Level 7

Core Units

<table>
<thead>
<tr>
<th>Code</th>
<th>Occ</th>
<th>Status</th>
<th>Unit Title</th>
<th>No of credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>69EG7619</td>
<td>9 (Sept)</td>
<td>None</td>
<td>Foundations of Geographical Information Systems</td>
<td>20</td>
</tr>
<tr>
<td>69EG7611</td>
<td>1 (Jan)</td>
<td>None</td>
<td>Geodata: Sources, Standards and Quality</td>
<td>20</td>
</tr>
<tr>
<td>69EG7612</td>
<td>4 (April)</td>
<td>None</td>
<td>Spatial Databases</td>
<td>20</td>
</tr>
<tr>
<td>69EG7617</td>
<td>4 (April)</td>
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<td>Research Methods in the Spatial Sciences – Geographical Information Systems</td>
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</tr>
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<td>9 (Sept)</td>
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<td>Research Dissertation</td>
<td>60</td>
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</tbody>
</table>

Option A Units
Choose 1 from options listed

<table>
<thead>
<tr>
<th>Code</th>
<th>Occ</th>
<th>Status</th>
<th>Unit Title</th>
<th>No of credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>69EG7613</td>
<td>9 (Sept)</td>
<td>None</td>
<td>Data Analytics</td>
<td>20</td>
</tr>
<tr>
<td>69EG7615</td>
<td>9 (Sept)</td>
<td>None</td>
<td>Environmental Analysis and Modelling</td>
<td>20</td>
</tr>
<tr>
<td>69EG7614</td>
<td>9 (Sept)</td>
<td>None</td>
<td>Earth Observation for GIS</td>
<td>20</td>
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</tbody>
</table>

Option B Units
Choose 1 from options listed

<table>
<thead>
<tr>
<th>Code</th>
<th>Occ</th>
<th>Status</th>
<th>Unit Title</th>
<th>No of credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>69EG7620</td>
<td>9 (Sept)</td>
<td>None</td>
<td>Distributed Geographical Information Systems</td>
<td>20</td>
</tr>
<tr>
<td>69EG7616</td>
<td>9 (Sept)</td>
<td>None</td>
<td>GIS Programming</td>
<td>20</td>
</tr>
</tbody>
</table>

On successful completion of the following Level 7 credits:

60 credits: interim/final exit award – PG Cert Geographical Information Systems
(Foundations of GIS + Geodata: Sources, Standard and Quality + Spatial Databases)

120 credits: interim/final exit award – PG Dip Geographical Information Systems
(PG Cert + Research Methods in the Spatial Sciences – Geographical Information Systems + Option A unit + Option B unit)

180 credits: Final exit award - MSc Geographical Information Systems
(PG Dip + Research Dissertation)

**MSc Applied Geographical Information Systems (Part-time by Distance Learning)**

**POSTGRADUATE**

**Level 7**

<table>
<thead>
<tr>
<th>Core Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>69EG7619</td>
</tr>
<tr>
<td>69EG7611</td>
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<tr>
<td>69EG7612</td>
</tr>
<tr>
<td>69EG7621</td>
</tr>
<tr>
<td>69EG7618</td>
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</table>

**Option Units**
*Choose 2 from options listed*

| Code | Occ | Status | Unit Title | No of credits |
| 69EG7613 | 9 (Sept) | None | Data Analytics | 20 |
| 69EG7615 | 9 (Sept) | None | Environmental Analysis and Modelling | 20 |
| 69EG7614 | 9 (Sept) | None | Earth Observation for GIS | 20 |

On successful completion of the following Level 7 credits:

60 credits: interim/final exit award – PG Cert Geographical Information Systems
(Foundations of GIS + Geodata: Sources, Standard and Quality + Spatial Databases)

120 credits: interim/final exit award – PG Dip Applied Geographical Information Systems
(PG Cert + Research Methods in the Spatial Sciences – Applied Geographical Information Systems + Option unit 1 + Option unit 2)

180 credits: Final exit award - MSc Applied Geographical Information Systems
(PG Dip + Research Dissertation)

**MSc Geographical Information Technologies (Part-time by Distance Learning)**
### Level 7

#### Core Units

<table>
<thead>
<tr>
<th>Code</th>
<th>Occ</th>
<th>Status</th>
<th>Unit Title</th>
<th>No of credits</th>
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<tbody>
<tr>
<td>69EG7619</td>
<td>9</td>
<td>None</td>
<td>Foundations of Geographical Information Systems</td>
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<tr>
<td>69EG7611</td>
<td>1</td>
<td>None</td>
<td>Geodata: Sources, Standards and Quality</td>
<td>20</td>
</tr>
<tr>
<td>69EG7612</td>
<td>4</td>
<td>None</td>
<td>Spatial Databases</td>
<td>20</td>
</tr>
<tr>
<td>69EG7620</td>
<td>9</td>
<td>None</td>
<td>Distributed Geographical Information Systems</td>
<td>20</td>
</tr>
<tr>
<td>69EG7616</td>
<td>9</td>
<td>None</td>
<td>GIS Programming</td>
<td>20</td>
</tr>
<tr>
<td>695G7622</td>
<td>4</td>
<td>None</td>
<td>Research Methods in the Spatial Sciences – Geographical Information Technologies</td>
<td>20</td>
</tr>
<tr>
<td>69EG7618</td>
<td>9</td>
<td>None</td>
<td>Research Dissertation</td>
<td>60</td>
</tr>
</tbody>
</table>

On successful completion of the following Level 7 credits:

- **60 credits**: interim/final exit award – PG Cert Geographical Information Systems (Foundations of GIS + Geodata: Sources, Standards and Quality + Spatial Databases)

- **120 credits**: interim/final exit award – PG Dip Geographical Information Technologies (PG Cert + Research Methods in the Spatial Sciences – Geographical Information Technologies + Distributed Geographical Information Systems + GIS Programming)

- **180 credits**: Final exit award - MSc Applied Geographical Information Technologies (PG Dip + Research Dissertation)
## SECTION D - TEACHING, LEARNING AND ASSESSMENT

<table>
<thead>
<tr>
<th>29</th>
<th>Articulation of Graduate Prospects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent publications, such as the Oxera (2013)(^1) report, highlight the global value and rise in use of “geo-services”, including online mapping technologies, and location-based services. These services are created and supported by a multi-billion (US) dollar global Geographical Information (GI) industry, which requires a highly skilled workforce capable of capturing, processing, analysing, and communicating spatial information through the use of GIS and related technologies.</td>
<td></td>
</tr>
<tr>
<td>UNIGIS is targeted at this workforce – people who currently work in, or with future career aspirations to enter, the GI industry. Many of our students work in diverse organisations, within both the public and private sector, often employing GIS and related technology on a daily basis. UNIGIS students can use our programme to develop their knowledge and skill set, whilst also enhancing their career opportunities. Our programme reviewers include people from industry and academia helping us to ensure that we provide a rigorous education programme that is relevant to employers. Student testimonials (including examples on our website <a href="http://www.unigis.org">www.unigis.org</a>) also highlight several of the opportunities that studying on our programme brings both in terms of learning about GIS and new work ambitions.</td>
<td></td>
</tr>
<tr>
<td>UNIGIS maintains contact with its alumni through the office and via a LinkedIn group, which allows us to share details of employment opportunities, as well as the suite of continuing professional development (CPD) units available from our programme. UNIGIS is also active at major trade conferences and exhibitions, which means that our staff actively monitor and respond to changes within the GI sector, which can help inform curriculum development (e.g. the adoption of free and open source technologies on the programme to reflect its growing use within the industry, and the creation of a CPD framework).</td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>30</th>
<th>Curriculum Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>The curriculum design has been developed in accordance with the principles of constructive alignment. The programme level learning outcomes are linked to the individual learning outcomes of the units that make up each award. Unit learning outcomes relate to elements of the unit syllabus and are tested via the unit assessments.</td>
<td></td>
</tr>
<tr>
<td>The curriculum design has evolved over the last 25 years. UNIGIS adopts a student-centred approach as the students are learning at a distance. The learning and teaching activities employed are based on encouraging the students (through the learning outcomes) to develop a deep learning approach by reflecting on their learning and using self-evaluation. Students take responsibility for the pace of their learning within an overall calendar set for the programme.</td>
<td></td>
</tr>
<tr>
<td>For each taught unit, the student is provided with a Directed Reader, which outlines the framework of study for the unit and provides the essential background knowledge. Each reader is split into sections, which align with the unit syllabus and their associated learning outcomes. The reader and additional materials are intended to provide the students with the required level of subject knowledge. The network provides students with numerous opportunities for formative assessment. Understanding of the subject knowledge is tested using self-assessment...</td>
<td></td>
</tr>
</tbody>
</table>
exercises and questions. These self-assessment exercises and questions are low stake assessments as they are not summative and do not count towards the final unit/module mark.

In addition to providing the requisite knowledge and understanding, for units where the learning outcomes require the development of practical skills, exercises using GIS software, databases and programming languages are provided (including both formative and summative assessment opportunities).

The learning outcomes relating to transferable skills are developed through the assessment strategies adopted. Students are encouraged to think critically in essay-based assessments. Skills in the application of knowledge and practical skills are developed through problem-solving assessments, which require students to implement spatial analysis using GIS and create databases. The research dissertation also develops students’ skills in the planning and execution of a piece of research.

The units on the programme are delivered in a mixture of formats including ‘short and fat’ units where learning needs to be sequential rather than in parallel, and ‘long and thin’. In the first year, units are short and run consecutively to allow students to concentrate on a single theme at a time. In the second year, the specialist units are mostly delivered from September to April, to provide sufficient lead-time to learn (and reflect on) more technical skills such as programming or image processing. The research methods unit runs in the summer term to help prepare students for the research dissertation in their final year of study.

Option Units
Option units listed in the curriculum structures (section C28 above) are all approved for delivery, but may not all run in any one academic session.

31 Learning and Teaching

Pre-entry activities
On request, students are issued with primer materials including a supplementary reading list to help them prepare for study on the programme. From 2017, the programme team propose to create a pre-enrolment area on the UNIGIS Moodle system to encourage and allow communications between new students (and with staff) prior to starting on the programme.

Formative Feedback
As noted above, all units adopt a range of self-assessment exercises and offer different examples of formative assessment and feedback (e.g. essay plans, peer assessment of research proposals). Early formative feedback is provided on the opening Foundations of GIS unit via self-assessment activities, and in the form of audio comments on essay plans in preparation for the first assignment.

The Student Experience
All students are provided with access to units and supporting resources on Moodle, together with access to general resources such as library facilities. The library staff at both Manchester Met and UoS provide information packs specifically tailored to off-campus students. An annual programme calendar is made available via Moodle and each individual unit includes an activity progress timetable to help students monitor their progress against a week-by-week study guide. Students are also presented with free specialist GIS software for use on the programme (including
assessment work). Additional software-specific training materials (e.g. ESRI online training courses) are also freely accessible to students.

**Student Engagement and Interaction**
In addition to offering an induction event, and an MSc workshop, the programme adopts a range of approaches to enhance student engagement and interaction, including (i) online forum discussion, (ii) the use of study groups, and (iii) online surgeries. All of the activities help to encourage communication between students and staff. The small study groups have proven particularly useful in encouraging students to join and engage in discussion to support their learning. Importantly, these groups have the further advantage of helping students to deal with the isolation commonly associated with online and distance learning. In several units, staff host online surgeries to communicate and interact with students, especially when tackling technical or software-related problems.

**The Student Voice**
As noted above, individual and cohort-wide communications with students are made using Moodle forums, email, and peer-to-peer technology (e.g. GoToMeeting). Opportunities to capture the student voice more formally include personal tutoring (by Programme Leaders), feedback through regular internal student surveys, and the student-staff liaison/programme committee meetings (held in winter and summer terms). All students can participate in student-staff liaison meetings, whilst elected student representatives attend programme committee meetings. Student representatives are elected for both institutions and are provided with online training from the Students’ Union.

**Research Informed Teaching**
The teaching staff are all either research active or are active in other related scholarly activities. All this activity ensures that the curriculum is research-informed and remains current and relevant to UNIGIS students.

### Assessment

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<th>32</th>
<th>Assessment</th>
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**Assessment Strategy and Management**
Students are required to complete two assignments for each unit studied. These assessments are spread out across the programme calendar (which is released at the beginning of the academic year) to ensure that students have sufficient time to plan, prepare and submit their work. Turnitin™ is also to be used to help students to improve their academic practice and thereby reduce the potential for plagiarism.

**Choice and Variety in Assessments**
The UNIGIS Network utilises a mixture of assessment types including essays, reports, dissertations, and practical-based activities. This variety enables students to develop and enhance both their academic and technical (industry-related) skills. Writing at postgraduate level is a key skill and therefore students are required to complete a variety of essays to develop their writing and argumentation skills. Practical-based assessment activities provide a research and professional focus, which closely reflects the nature of the GI industry, and helps students to build a portfolio of work that can be used to demonstrate their practical and technical skills.
### Assessment Information Provided to Students

Students are provided with a detailed assessment proforma for each assignment which includes a detailed brief of the task, the assessment criteria and university grade descriptors, marking scheme, an example of the feedback sheet, and details of how formative and summative feedback will be provided, including the date for return of summative feedback.

### Marking Policy

All coursework is marked on a 0-100% scale adopting the university grade descriptors. Currently anonymous marking is not used on the programme. In line with university procedures, a subset of marked coursework for each unit assessment is moderated by another member of the UNIGIS academic team, and all marked coursework can potentially be reviewed by the External Examiners.

### Inclusive Practice

The programme complies with the Manchester Metropolitan University’s Equality and Diversity Policy and relevant legislation regarding accessibility of learning opportunities.

### Technology Enhanced Learning

A bespoke Moodle-based VLE is employed for the programme to enable easy access and a uniform experience for all students irrespective of their place of registration (Manchester Met or UoS). This is locally administered by the UNIGIS Programme Leader and Administrative team based at Manchester Metropolitan University. The team also employ online surgery software to enable synchronous meetings with remotely based students (enabling the sharing of desktops to work through a software problem for example).

All students are provided with specialist GIS and image processing software, via internet download, to support their studies. The software is available at no cost (to either students or institutions) either as free and open source technology or through a UNIGIS International Association software license agreement with industry-leading proprietary software companies.

### Placement and/or Work-based Learning Activities

The UNIGIS programme does not include any placement or work-based learning activity.

### Engagement with Employers

UNIGIS UK engages with employers on various levels. The programme has educational institution membership status of the Association for Geographic Information, which allows tutors and students to attend industry events, and participate in special interest groups (e.g. AGI North). Membership of the UNIGIS International Association provides access to the wider international GIS community and opportunities for networking with major software vendors and other professional bodies and organisations – helping to inform curriculum development, showcase innovative GIS research through webinars, and provide access to leading edge software. The programme team also has access to (and has published in) trade magazines, which helps keep staff informed on emerging developments within the GI industry. All this together with our activities at major trade conferences and exhibitions means that the staff can monitor and respond to changes within the sector to help inform curriculum content and programme delivery. The inclusion of a GIS industry representative on the periodic programme review panel provides a further opportunity to ensure
that UNIGIS course content is relevant and up to date for people in the workplace. Employer engagement by the programme team has led to further student benefits, including student prizes previously funded by a local company.

### 37 Personal Development Planning

Whilst the UNIGIS programme is not currently validated by any external bodies, our units have previously been recognised by the Association for Geographical Information’s (AGI) CPD scheme, whereby students can obtain credits for studying on the programme. Students enrolling on the programme will be actively encouraged to maintain a portfolio or blog of their study activities.

### SECTION E - PROGRAMME MANAGEMENT

#### 38 Programme Specific Admission Requirements

The normal admission requirement for the UNIGIS Network is a Bachelor’s degree and/or equivalent prior experiential work-based learning. As a vocational network, UNIGIS has a small percentage of students entering without a first degree – in such circumstances students would only be accepted on provision of relevant GIS-related work experience (e.g. at least 5 years of related work experience).

**NB Minimum admission points for entry to the University are reviewed on an annual basis. For entry requirements refer to the current University on-line prospectus**

#### 39 Programme Specific Management Arrangements

- **Collaborative Partnerships**

  **UNIGIS Management Board** – the UNIGIS Management Board is a joint body of Manchester Met /UoS. It directs the Network and determines its policy. This includes budgets, admission, structure, and monitoring and evaluation; subject to the policy frameworks of the Academic Boards/Senate of the two institutions. It normally meets twice a year and is responsible for the Network Accounts.

  **Composition of UNIGIS Management Board** – The UNIGIS Management Board will consist of the following members:

  - The Pro-Vice-Chancellor/Dean of School (or their nominee) associated with the DL Postgraduate GIS Network (UNIGIS) at both Manchester Met and the UoS (ex officio)
  - The Heads of the Division/School (or their nominee) at Manchester Met, and the Postgraduate Academic Lead (or their nominee) at UoS, associated with the DL Postgraduate GIS Network (UNIGIS) (ex officio)
  - The Programme Director of UNIGIS UK
  - The Programme Leader from both awarding universities
  - Financial Representatives from both Manchester Met and the UoS responsible for the Network accounts

  The quorum for this board shall normally be attendance of at least one member from each institution plus the Manchester Met finance representative.
The UNIGIS Management Board will be serviced by the UNIGIS Administrator.

Programme Committee/Joint Board of Study – A single, joint committee will meet as Programme Committee (for Manchester Met) and as Joint Board of Study (for UoS) to oversee academic and quality assurance issues of the Network. It will also provide an opportunity for students to give formal feedback on their experience of the Network via student representatives.

Membership of Programme Committee/Joint Board of Study – The Network Committee/Joint Board of Study will consist of the following members:

- Heads of Division/School (Division of Geography and Environmental Management, School of Science and the Environment at Manchester Met), or their nominee, and Dean of School (School of Environment and Life Sciences at UoS), or their nominee, associated with the Network (ex officio)
- Programme Director and Programme Leaders from each awarding institutions (one of whom shall be Chair).
- Members of the Network Teaching Team.
- Representations from students*.

*This may be in person, but normally will be by written submission (and possibly by audio or video conferencing). The views of students will be sought prior to each Network Committee/Joint Board of Study meeting via the Staff-Student Liaison Committee.

The terms of reference for the Joint Board of Study at University of Salford (Scheme of Academic Governance 2016-17) will be:

a) To consider and report as appropriate to the School Executive on all academic matters concerning the programme.

b) To monitor and report on the conditions set at approval and re-approval.

c) To advise School Executive and to provide it, where appropriate, with management information on the joint management of the programme.

d) Under authority delegated by the University, to oversee the operation and organisation of the programme, including admissions requirements.

e) To monitor the suitability of staff appointed by the Collaborative Partner to deliver the programme.

f) To recommend the appointment of External Examiners and the constitution of the Boards of Examiners.

g) To ensure the appointment and monitoring or personal tutors in line with University procedures and guidance.

h) To monitor students access to learning resources including library and IT facilities.

i) To monitor student access to appropriate student support.

j) To consider the annual programme monitoring report or approved equivalent prior to its submission to the School Executive.

k) To consider the results of student evaluative questionnaires.

l) To determine appropriate levels of academic performance, to monitor those levels and to measure actual outcomes against those levels.

m) To consider and report on any matter referred to the Board concerning the programme.

Programme Team Meetings – As a collaborative and distance learning programme with staff at two different universities/locations, it is necessary to ensure good communication amongst the team delivering the programme at the day-to-day level. Delivery of on-line
provisions requires more frequent and slightly less formal coordination than the Programme Committee/Joint Board of Study normally provide. Programme Team Meetings are designed to provide that opportunity.

*The role is to monitor day-to-day provision of the Network, including:*

- Regular monitoring of student progression
- Coordination and communication between Manchester Met and UoS
- The design and delivery of teaching materials
- Provision of software resources to students
- The design and function of the website
- Consideration of developments within e-learning/distance learning
- Consideration of developments arising from the UNIGIS International Association

The Programme Team Meetings will refer all relevant issues to the Programme Committee/Joint Board of Study for formal consideration and inclusion into the Universities’ formal processes. It will also refer any relevant concerns to the UNIGIS Management Board.

*Membership of the Programme Team will include:*

- Heads of Division/School (or equivalent) collaborating in the programme (*ex officio*)
- All tutors and Programme Leaders involved in preparing materials, assessing work, supervising MSc projects, and undertaking admissions
- All administrative staff working on the programme
- Invited members with specialist expertise (for example staff from other UNIGIS sites worldwide) able to contribute to the development of the programme

Meetings are held regularly during term-time. Although not a formal part of the Universities’ usual structures, meetings will be minuted and made available to the UNIGIS Management Board and Heads of Division/School (or equivalent) on request.

- **Other** (including off-site delivery, DL, placement etc.)

The UNIGIS network has a dedicated office with a complement of two full-time staff.

- The Administrator
- The Clerical Assistant

*NB: see guidance on University’s Management of Programme Delivery*

### Staff Responsibilities

#### General

*Tutors*

Unit tutors are responsible for the coordination of the teaching and assessment of a unit. They will liaise with the Programme Leaders, the UNIGIS office, and other teaching staff, and will ensure that teaching materials and assessments are made available on schedule. Tutors are also required to
ensure that assessments are verified before release and that unit marks are moderated before the exam board takes place. Unit tutors will play a major role in monitoring student progress on the unit and providing specific guidance and feedback to students.

**MSc Coordinator**
The MSc Coordinator will be responsible for ensuring that students are assigned to a project, for communicating with students whilst projects are being undertaken, for ensuring that all elements of the MSc Project and Dissertation are undertaken, and marks collated and returned to the UNIGIS Office. The MSc Coordinator will liaise with the Divisional Health and Safety Coordinator to ensure that projects meet the universities’ safety requirements. The MSc Coordinator will ensure that application for ethical approval for research projects will be made in accordance with Faculty/University procedures.

**Admissions Tutor**
The Admissions Tutor will scrutinise and return applications to the UNIGIS office. The role will be supported by the UNIGIS clerical assistant and require familiarity with international qualifications (e.g. use of NARIC system) for entry to postgraduate programmes.

**Programme Leader**
Both Manchester Met and UoS will each appoint a programme leader who will be responsible for (i) programme level support for all students, and (ii) quality of the programme including maintenance of academic standards. The programme leaders will act as personal tutors to the students throughout their studies on the UNIGIS programme (a role shared with the Dissertation supervisor in the final year of study). The appointment and duration of office of a Programme Leader shall be determined by the relevant Head of Division/School in consultation with the appropriate Dean of Faculty/College.

- **Collaborative Partnerships**

**Programme Director**
The Programme Director (role appointed at Manchester Met) shall be responsible for the overall academic management and organisation of the Network. The Programme Director shall, *inter alia*:

- Normally chair the Programme Committee and be responsible for convening its meetings
- Coordinate the management of the Network to ensure that it conforms to the definition as detailed within this document
- Report on matters of concern to the Programme Committee/Joint Board of Study, to the Head of Division/School and to the university
- Ensure that a system is in place to provide a means for administering the Network
- Supervise the preparation of assessment materials for inspection by External Examiners
- Liaise with External Examiners in consultation with the Chair of the Board of Examiners
- Ensure that adequate guidance and counselling processes are in place for students
- Compile on a continuous basis any requirements for quality assurance set by the universities for the Network (i.e. Continuous Improvement Plan process)
• **UNIGIS Office**

The UNIGIS Office (based at Manchester Met) comprises a dedicated team of 2 full-time staff (*The Administrator* and *Clerical Assistant*). The office is responsible for various matters relating to the day-to-day running of the programme including:

- All matters relating to enrolment and payment of fees
- Provision of administrative support for the UNIGIS programme (including maintenance of student records)
- Front-line assistance and pastoral support to students
- Compilation of monitoring statistics for the Programme Director
- Monitoring and Administration of UNIGIS website and Moodle VLE
- Distribute specialist software licenses and other materials to students
- Assisting Programme Leaders with the planning and scheduling of programme activity
- Assisting Programme Leaders with the planning and scheduling of UNIGIS International Association activity
- Assisting Programme Leaders with the marketing of the programme
- Servicing and organisation of the Programme Team meetings
- Servicing and preparing materials for Boards of Examiners, and Management Board meetings

*NB: the University’s Management of Programme Delivery is available from the CASQE website*

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<tr>
<th>41</th>
<th>Programme Specific Academic Student Support</th>
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Generic academic student support is provided to all students in line with the guidance outlined in Manchester Metropolitan University’s *University’s Student Handbook*.

*For collaborative partners only:*
*The Collaborative Partner Student Handbook is available from the CASQE website)*

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<th>42</th>
<th>Programme Specific Student Evaluation</th>
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The Programme complies with current institutional evaluation guidance at Manchester Met.

*NB: University guidance on Evaluation of Student Opinion is available from the CASQE*

**Programme Specific Evaluation**

Given the nature of the jointly delivered award, the programme is currently exempt from the internal student survey (ISS) at Manchester Metropolitan University. A version of the ISS is run separately for UNIGIS students at both institutions using the bespoke Moodle system.
## PROGRAMME SPECIFICATION

### SECTION F – MAPPING

#### ASSESSMENT / OUTCOMES MAP

**Map guide:**
- **GO** = Manchester Met Graduate Learning Outcomes (Section 23)
- **PLO** = Programme Learning Outcomes (Section 26) – add more lines as appropriate

✓ insert as appropriate

**PG Cert / PG Dip / MSc Geographical Information Systems**

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<th>69EG7611 Geodata: Sources, Standards and Quality (Core)</th>
<th>69EG7612 Spatial Databases (Core)</th>
<th>69EG7617 Research Methods in the Spatial Sciences – GIS (Core)</th>
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Area highlighted in green relates to the PgCert stage only
## Programme Specification

### PG Dip / MSc Geographical Information Technologies

<table>
<thead>
<tr>
<th>Level 7</th>
<th>69EG7619 Foundations of Geographical Information Systems (Core)</th>
<th>69EG7611 Geodata: Sources, Standards and Quality (Core)</th>
<th>69EG7612 Spatial Databases (Core)</th>
<th>69EG7622 Research Methods in the Spatial Sciences - GIT (Core)</th>
<th>69EG7620 Distributed Geographical Information Systems (Core)</th>
<th>69EG7616 GIS Programming (Core)</th>
<th>69EG7618 Research Dissertation (Core)</th>
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Approved Modifications to Programme Specification since Approval/Last Review

The following log provides a cumulative of minor and major modifications made to the Programme Specification since its approval/last review.

<table>
<thead>
<tr>
<th>FAQSC Reference (or PARM ref for Major Modifications requiring strategic approval)</th>
<th>Programme Specification Title (specify award titles/routes affected by change)</th>
<th>Brief Outline of Minor Modification/ Major Modification (Minor - include level &amp; title of units &amp; a brief description of modification) (Major - include details of change such as new routes, pathways etc)</th>
<th>Date of FAQSC Approval (or PARM event)</th>
<th>Approval effective from:</th>
<th>Details of cohort of students who will be affected by the modification (eg students entering Level 5 wef September 2014 onward)</th>
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