# Programme Specification

**Postgraduate**

Applicable to postgraduate programmes

Please click [here](#) for guidance on completing this specification template.

## Part A: Programme Summary Information

<table>
<thead>
<tr>
<th>1. Title of programme:</th>
<th>Big Data Analytics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Programme Code:</td>
<td></td>
</tr>
<tr>
<td>3. Entry Award(s):</td>
<td>Credit: Level:</td>
</tr>
<tr>
<td>□ MA</td>
<td></td>
</tr>
<tr>
<td>☒ MSc</td>
<td>180 7</td>
</tr>
<tr>
<td>☒ PGDip</td>
<td>120 7</td>
</tr>
<tr>
<td>☒ PGCert</td>
<td>60 7</td>
</tr>
<tr>
<td>☒ PG Award</td>
<td>30 7</td>
</tr>
<tr>
<td>□ DPS</td>
<td></td>
</tr>
<tr>
<td>□ CPS</td>
<td></td>
</tr>
<tr>
<td>□ Other (please specify below:</td>
<td></td>
</tr>
</tbody>
</table>

| 4. Exit Awards:           | Credit: Level: |
| PGDip                    | 120 7         |
| PGCert                   | 60 7          |
| PG Award                 | 30 7          |
| CPS                      |               |

Exit awards will automatically bear the name of the entry award. If an exit award is to be unnamed (i.e. it will show only the qualification achieved) or if it is to have a different name from the entry qualification you must indicate this below:

See “Criteria for the award of an alternative qualification” under S37

<table>
<thead>
<tr>
<th>5. Date of first intake:</th>
<th>March 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>Frequency of intake:</td>
</tr>
</tbody>
</table>
| 7. | Duration and mode of study: | MSc: Part-time 2-3 years  
PGDip: Part-time 1-3 years  
PGCert: Part-time 30 weeks - 3 years  
PGAward: Part-time 30 weeks - 2 years  
The mode of study is by online learning |
| 8. | Applicable framework: | University Framework for Postgraduate Modular Provision  
Framework exemption required: ☒ No (please go to section 9)  
☐ Yes (please provide a brief summary below) |
| 9. | Applicable Ordinance: | General Ordinance for Modular Master’s Degrees, Postgraduate Diplomas, Postgraduate Certificates and Postgraduate Awards.  
New/revised Ordinance required: ☒ No (please go to section 10)  
☐ Yes (please provide a brief summary below) |
| 10. | Faculty: | Faculty of Science and Engineering |
| 11. | Level 2 School/Institute: | School of Electrical Engineering, Electronics and Computer Science |
| 12. | Level 1 unit: | Department of Computer Science |
| 13. | Campus: | |
| 14. | Other contributors from UoL: | |
| 15. | Teaching other than at UoL: | Laureate Online Education |
| 16. | Director of Studies: | Professor Frans Coenen |
| 17. | Board of Studies: | Computer Science Board of Studies (Online) |
## Part B: Programme Aims & Objectives

### 26. Aims of the Programme

The MSc in Big Data Analytics is designed to allow students to gain a specialist qualification in an area of computing that has seen recent and rapid growth, and in which there is expected to be a significant skills shortage. The programme will provide students with a comprehensive understanding of both the technology that supports Big Data Analytics and the practical application of this technology in the context of business information and real world problems. The individual aims are as follows:

<table>
<thead>
<tr>
<th>No.</th>
<th>Aim:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To enable students to build a solid theoretical and practical academic foundation with respect to the techniques and challenges of Big Data Analytics.</td>
</tr>
<tr>
<td>2</td>
<td>To allow students to acquire an in-depth understanding of the technical and managerial end-to-end challenges associated with the storing, processing, visualisation and mining of large disparate data collections.</td>
</tr>
<tr>
<td>3</td>
<td>To provide students with a critical understanding of the challenges that private and public enterprises face with respect to the practical adoption of Big Data Analytics within the modern workplace.</td>
</tr>
<tr>
<td>4</td>
<td>To provide students with the practical ability to apply the tools and techniques of big data analytics in the context of business information and real world problems so as to support data driven decision-making.</td>
</tr>
</tbody>
</table>
To develop the ability of students to work independently, and with others, to research, design, implement and execute creative solutions to practical and commercial problems in the context of Big Data and Data Analytics, and to subject their work and that of others to critical analysis and evaluation.

To provide students with an opportunity to create a professional development plan and, throughout the course of the programme, build an E-Portfolio that exhibits their understanding of Big Data Analytics and the practical application of Big Data technology.

<table>
<thead>
<tr>
<th>No.</th>
<th>Learning outcomes – Master’s degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A critical awareness of current technical developments at the forefront of Computer Science and Information Technology.</td>
</tr>
<tr>
<td>2</td>
<td>An in depth, systematic and critical understanding of current technologies within the domain of Big Data Analytics, Machine Learning and Data Mining; coupled with an ability to assess, appraise and apply these technologies so as to realise practical solutions to Big Data problems within the working environment.</td>
</tr>
<tr>
<td>3</td>
<td>A comprehensive and wide ranging critical understanding of supporting technologies for Big Data Analytics, and the usage of this technology to support data driven decision-making.</td>
</tr>
<tr>
<td>4</td>
<td>A critical awareness and comprehensive understanding of the importance of Legal, Ethical, Professional and Social Issues (LEPSI) within the domain of computer science.</td>
</tr>
<tr>
<td>5</td>
<td>A complete and comprehensive understanding of how the techniques and tools of big data predictive analytics can be used to add “business value” by supporting data driven decision-making in the modern work place.</td>
</tr>
<tr>
<td>6</td>
<td>An in depth and systematic understanding of selected recent technological developments within the domain of Computer Science.</td>
</tr>
<tr>
<td>7</td>
<td>A deep and systematic understanding of the process of planning and carrying out a major project within the domain of Big Data Analytics, requiring original thought and substantial aspects of self-directed research, creative design, realisation and critical evaluation and reflection.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Learning outcomes – Postgraduate Diploma</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A critical awareness of current technical developments at the forefront of Computer Science and Information Technology.</td>
</tr>
<tr>
<td>2</td>
<td>An in depth, systematic and critical understanding of current technologies within the domain of Big Data Analytics, Machine Learning and Data Mining; coupled with an ability to assess, appraise and apply these technologies so as to realise practical solutions to Big Data problems within the working environment.</td>
</tr>
<tr>
<td>3</td>
<td>A comprehensive and wide ranging critical understanding of supporting technologies for Big Data Analytics, and the usage of this technology to support data driven decision-making.</td>
</tr>
<tr>
<td>4</td>
<td>A critical awareness and comprehensive understanding of the importance of Legal, Ethical, Professional and Social Issues (LEPSI) within the domain of computer science.</td>
</tr>
<tr>
<td>5</td>
<td>A complete and comprehensive understanding of how the techniques and tools of big data predictive analytics can be used to add “business value” by supporting data driven decision-making in the modern work place.</td>
</tr>
</tbody>
</table>
An in depth and systematic understanding of selected recent technological developments within the domain of Computer Science.

### Learning Outcomes

#### Learning outcomes – Postgraduate Certificate

<table>
<thead>
<tr>
<th>No.</th>
<th>Learning outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A critical awareness of current technical developments at the forefront of Computer Science and Information Technology.</td>
</tr>
<tr>
<td>2</td>
<td>An in depth and critical understanding of current technologies within the domain of Big Data Analytics; coupled with an ability to assess, appraise and apply these technologies so as to realise practical solutions to Big Data problems within the working environment.</td>
</tr>
<tr>
<td>3</td>
<td>An in depth and critical understanding of supporting technologies for Big Data Analytics, and the usage of this technology to support data driven decision-making.</td>
</tr>
</tbody>
</table>

#### Learning outcomes – Postgraduate Award

<table>
<thead>
<tr>
<th>No.</th>
<th>Learning outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A wide ranging, systematic and critical understanding of current technologies within the domain of Big Data Analytics, Machine Learning and Data Mining; coupled with an ability to assess, appraise and apply these technologies so as to realise practical solutions to Big Data problems within the working environment.</td>
</tr>
</tbody>
</table>

### Mapping of subject-based learning outcomes:

<table>
<thead>
<tr>
<th>Learning outcome No.</th>
<th>Module(s) in which this will be delivered</th>
<th>Mode of assessing achievement of learning outcome</th>
<th>PSRB/Subject benchmark statement (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CKIT500</td>
<td>Practical assessments/Reports Discussion Questions</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>CKIT525, CKIT527, CKIT702</td>
<td>Practical assessments/Reports Discussion Questions/Dissertation</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>CKIT523, CKIT528, CKIT702</td>
<td>Practical assessments/Reports Discussion Questions/Dissertation</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The concept of LEPSI features throughout the entire programme, but is specifically covered in CKIT522</td>
<td>Practical assessments/Reports Discussion Questions</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>CKIT526, CKIT528</td>
<td>Practical assessments/Reports Discussion Questions</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Elective</td>
<td>Practical assessments/Reports Discussion Questions</td>
<td></td>
</tr>
</tbody>
</table>
28. **Skills and Other Attributes**

No. | Skills and attributes:
--- | ---
1 | A comprehensive and systematic understanding of the process of Online Learning and its significance with respect to independent learning and continuing professional development.
2 | A wide-ranging understanding of the importance of teamwork and cooperation in today’s global IT industry, and the essential practical and personal skills required to share knowledge and participate in teams.
3 | The ability to present and communicate professional concepts to colleagues and clients.
4 | A comprehensive ability to apply the techniques and mechanisms required for: self-directed research, the acquisition of new knowledge and further future learning.

28a. **Mapping of skills and other attributes:**

<table>
<thead>
<tr>
<th>Skills and other attributes No.</th>
<th>Module(s) in which this will be delivered and assessed</th>
<th>Learning skills, research skills, employability skills</th>
<th>Mode of assessing achievement of the skill or other attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Online Learning features throughout the programme, but its significance is highlighted in CKIT500</td>
<td>Learning</td>
<td>Practical, Written</td>
</tr>
<tr>
<td>2</td>
<td>CKIT522, CKIT523, CKIT525</td>
<td>Employability</td>
<td>Practical, Written</td>
</tr>
<tr>
<td>3</td>
<td>CKIT500, CKIT522, CKIT523, CKIT525, CKIT526, CKIT527, CKIT528, Electives, CKIT702</td>
<td>Employability</td>
<td>Practical, Written</td>
</tr>
<tr>
<td>4</td>
<td>CKIT702</td>
<td>Learning Research</td>
<td>Dissertation</td>
</tr>
</tbody>
</table>

29. **Career opportunities:**

The programme is aimed principally at graduates who are already in IT-related employment who seek to enhance their abilities in the context of Big Data and Big Data Analytics. An employment area where there is currently a well documented shortage of qualified individuals in a field expected to have sustained growth in coming years. It is intended that the programme will underpin and enhance students’ existing knowledge and understanding, bringing it up to date with current developments concerning Big Data Analytics, and augmenting this knowledge and understanding with additional specialised knowledge in an area chosen by the student. The expectation is that this enhancement, together with the skills and abilities that will be learnt on the programme, will provide a strong foundation for career development towards senior technical and managerial positions in the big data industry.

Part C: Entrance Requirements
30. **Academic Requirements:**

   Either a first degree in Computer Science, or some similar numeric subject, equivalent to a UK Bachelor’s degree, coupled with 2 years relevant IT professional experience; or such experience in IT employment as would be considered to be comparable with the award of a Bachelor’s degree. A foundation in programming will be an essential requirement for entry onto the programme.

   Applications from students with a professional IT background, rather than a Bachelor’s degree, will be assessed in accordance with established practice for the University of Liverpool’s online Computer Science programmes that are delivered in collaboration with Laureate Online Education, as follows:

   1. At least three years experience for holders of the equivalent of an HNC/HND (or 2 years certified HE).
   2. At least five years experience for holders of the equivalent of GCE A-levels or an ONC/OND.
   3. At least ten years of experience otherwise.

   The initial contact for applicants will be a representative of Laureate Online Education. The final decision as to whether to admit an applicant to the programme lies with the Department of Computer Science at the University of Liverpool.

31. **Work experience:**

   For graduates (as noted above) normally two years’ work experience in IT-related employment is required; a significantly longer period of relevant employment is necessary for candidates lacking a first degree.

32. **Other requirements:**

   English-language skills equivalent to at least IELTS 6.5.

**Part D: Programme Structure**

33. **Programme Structure:**

   Students can register for any of the following four entry awards: (i) MSc in Big Data Analytics, (ii) Postgraduate Diploma (PG Dip) in Big Data Analytics, (iii) Postgraduate Certificate (PG Cert) in Big Data Analytics (iv) Postgraduate Award (PG Award) in Big Data Analytics. Note that learning on this programme is linear in nature. The expectation is that students will take one module at a time (see also Section 36, Learning and Teaching Strategy). Below modules are listed in the order that it is recommended that they are taken. Although none of the modules feature prerequisites the ordering is such that students knowledge and skills develop as the programme progresses.

   1. **Programme Structure**

      All modules are at level 7.

   1.1 **MSc in Big Data Analytics**

      The modules in the MSc in Big Data Analytics programme are as follows:
**Mandatory modules:**
1. CKIT500 The Global Technology Environment (15 credit points).
2. CKIT525 Big Data (15 credit points).
3. CKIT527 Data Mining (15 credit points).
4. CKIT528 Data Visualisation and Warehousing (15 credit points).
5. CKIT522 Professional Issues in Computing (15 credit points).
6. CKIT526 Predicative Analytics for Decision Making (15 credit points).
7. CKIT523 Cloud Computing (15 credit points).
8. CKIT702 Dissertation Project (60 credit points).

**Elective modules (choice of one):**
1. CKIT503 Programming the Internet (15 credit points).
2. CKIT504 Designing and Managing Databases (15 credit points).
3. CKIT505 Computer Communications and Networks (15 credit points).
4. CKIT507 Software Engineering (15 credit points).
5. CKIT510 Object Oriented Programming in Java (15 credit points).
6. CKIT511 Security Engineering and Compliance (15 credit points).
7. CKIT514 Information Technology Project Management (15 credit points).
8. CKIT515 Systems Analysis and Design using an Object Oriented Approach (15 credit points).
9. CKIT518 Software Quality Assurance (15 credit points).
10. CKIT519 Cyber Forensics (15 credit points).
11. CKIT524 Social Computing (15 credit points).
12. CKIT529 Applied Cryptography (15 credit points).
13. CKIT530 Cyber Crime Prevention and Protection (15 credit points).
14. CKIT531 Security Risk Management (15 credit points).
15. CKIT551 Understanding Organisations and Human Behaviour (15 credit points).
16. CKIT552 Managing Organisational Resources (15 credit points).
17. CKIT553 Marketing Management (15 credit points).
18. CKIT556 Information Technology Leadership (15 credit points).
19. CKIT557 Strategic Technology Management (15 credit points).
20. CKIT558 Technology Innovation and Change Management (15 credit points).

Under special circumstances students can apply to the Director of Studies for the programme to take an alternative module available within the on-line Computer Science provision. A structure diagram indicating the modules in the programme is presented in Figure 1. There are exit points for (i) PG Award after 30 credits have been successfully completed (which may not include any dissertation credit), (ii) a PG Cert after 60 credits have been successfully completed (which may not include any dissertation credit), and (iii) a PG Dip after 120 credits have been successfully completed (the 120 credits may include dissertation credits to the value of 60 credits).
1.2 PG Dip in in Big Data Analytics (Entry Award)

The modules in the PG Dip in Big Data Analytics (entry award) programme are identical to those prescribed for the MSc in Big Data Analytics except for the 60-credit dissertation module (CKIT702). Students following the PG Dip in Big Data Analytics programme do not undertake a final dissertation project. Under special circumstances students can apply to the Director of Studies of the programme to take an alternative module available within the online Computer Science provision. There are exit points for: (i) a PG Award after 30 credits have been successfully completed, and (ii) a PG Cert after 60 credits have been successfully completed (which may not include any dissertation credit).
1.3 PG Cert in Big Data Analytics (Entry Award)

The modules in the PG Cert in Big Data Analytics (entry award) programme include:

**Mandatory modules:**

1. CKIT500 The Global Technology Environment (15 credit points).
2. CKIT525 Big Data (15 credit points).
3. CKIT526 Predicative Analytics for Decision Making (15 credit points).
4. CKIT522 Professional Issues in Computing (15 credit points).

There is an exit point for a PGA after 30 credits have been successfully completed. Under special circumstances students can apply to the Director of Studies for the programme to take an alternative module available within the online Computer Science provision.

1.4 PG Award in Big Data Analytics (Entry Award)

The modules in the PG Award in Big Data Analytics (entry award) programme include:

**Mandatory modules:**

1. CKIT525 Big Data (15 credit points).
2. CKIT527 Data Mining (15 credit points).

There is no exit point for the PG Award.

34. **Industrial placement/work placement/year abroad:**

Not applicable

35. **Liaison between the Level 2 Schools/Institutes involved:**

Delivery of the programme is undertaken by the Department of Computer Science at the University of Liverpool in partnership with Laureate Online Education. Staff within the Department of Computer Science liaise regularly with colleagues at Laureate who are responsible for the day-to-day management of the programme. The University retains control over all academic aspects of the programme and its delivery. Appropriate Laureate personnel are represented on the Board of Studies and Board of Examiners, together with representatives of the Department of Computer Science.

Part E: Learning, Teaching and Assessment Strategies

36. **Learning, Teaching and Assessment Strategies:**

The mode of delivery of taught modules is by internet facilitated distance learning (online learning). This mode of study enables students to pursue...
modules via home study while continuing in employment.

Module delivery involves the establishment of a virtual classroom in which a relatively small group of students (usually 15-20) work under the direction of a module instructor, using an internet-based distance learning package. Module delivery proceeds via a series of one-week online seminars, each of which typically includes:

1. An online lecture, and other learning materials, posted electronically to a public folder in the virtual classroom.
2. Coursework assignments, which may include both reading assignments and practical work, results from which are posted to closed folders in the virtual classroom.
3. Class discussions and group assignments, facilitated and moderated by the class instructor, carried out within open folders.

Communication within the virtual classroom is asynchronous, preserving the requirement that students are able to pursue the course in their own time, within the weekly time-frame of each seminar.

To prepare students for the online mode of learning the programme starts with an "onboarding" module which is two weeks longer than the other taught modules so as to provide students with sufficient time to become accustomed to the adopted eLearning platform. Students receive instructions on accessing the platform, finding online materials and other aspects of online learning prior to starting the programme.

Two broad principles inform the teaching and learning strategy: social constructivism and collaborative enquiry. Social constructivism describes a view of learning in which students construct their own unique understanding of a subject, through a process which includes social interaction so that the learner can explain understandings, receive feedback from teachers and other students, clarify meanings, and reach a group consensus. Collaborative enquiry via Internet-mediated communication provides a framework for this mode of learning. The aim is to use the medium to foster the creation of a learning community, which will enable: dialogue between participants, sharing of information, and collaborative project work. This mode of learning is particularly appropriate when, as in this case, the students themselves will often bring knowledge and expertise that is outside the experience of the course teacher, and which can be shared with the group.

A key feature of the approach is the use of moderated discussions of material introduced in the virtual classroom. Every taught module includes, each week, a discussion of topics specified by the instructor. Participation in these discussions is a requirement for students attending, and forms part of the basis for assessment. This requirement ensures a continuing commitment from the students to the learning process.

The concluding dissertation project module is also carried out online, normally via individual supervision.

All communications that take place within the virtual classroom, including all assignments carried out by students and assessments by instructors, are recorded and are available for scrutiny by staff with appropriate access permissions. This enables two aspects of quality control:

1. Module delivery is monitored by staff at The Department of Computer
Science to ensure that defined syllabuses, procedures, and assessment processes are followed, appropriate standards are maintained, and to check for plagiarism.

2. All assessments are subject to the Universities moderating procedures. All assessment is subject to inspection by external examiners.

Under normal circumstances students will be expected to take one module at a time. Under special circumstances students can apply to the Director of Studies to take two modules at the same time. The taking of three modules at the same time is strongly discouraged. Students who elect to take more than one module at a time cannot use this as grounds for an extenuating circumstances claim.

36a. **Learning, Teaching and Assessment methods:**

Assessment is entirely based on work carried out in the virtual classroom, including contribution to discussions, weekly assignments, and longer individual or group-based projects. The weighting assigned to each component is prescribed separately for each module. The main aim of the assessment strategy is to verify the achievement of learning outcomes within the broad framework of the degree classification, thus at Pass, Merit and Distinction levels.

37. **Assessment information for students:**

**Code of Practice on Assessment**

The University has a Code of Practice on Assessment which brings together the main institutional policies and rules on assessment. The Code is an authoritative statement of the philosophy and principles underlying all assessment activities and of the University's expectations in relation to how academic subjects design, implement and review assessment strategies for all taught programmes of study.

The Code of Practice includes a number of Appendices which provide more detail on the regulations and rules that govern assessment activity; these include:

- The University marks scale, marking descriptors and qualification descriptors;
- The framework for modular, postgraduate programmes;
- Information about students’ progress, including guidance for students;
- The procedure for assessment appeals;
- Regulations for the conduct of exams;
- The University’s policy on making adjustments to exam arrangements for disabled students.
- The code of practice relating to external examining (see also below)
- The Academic Integrity Policy, which covers matters such as plagiarism and collusion and includes guidance for students;
- The policy relating to mitigating circumstances which explains what you should do if you have mitigating circumstances that have affected assessment; and
- The policy on providing students with feedback on assessment.

Please click [here](#) to access the Code of Practice on Assessment and its appendices; this link will also give you access to assessment information that is specific to your cohort:

A summary of key assessment information is also available in the ‘Your
Marking criteria:
Taught modules are typically eight weeks in duration. Typically students receive grades for several units of assessment carried out each week. Grading is founded on a six-point scale: A* A B C D F. The grade descriptors to be used in association with this six-point scale are presented in Table 1 below. These grades are converted into a weighted average final mark (expressed as a percentage) for each module. These final module marks will then be used to determine the degree award and for inclusion in transcripts. The weightings given to each component making up individual modules are specified in the module specifications. Major projects (such as the final dissertation) will be assessed directly using a numeric scale (as prescribed in the appropriate module specification).

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Numerical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td>High Distinction-level work: Factually almost faultless; authoritative coverage of topic; strong evidence of outside reading/research; substantial elements of originality and independent thought. Perceptive; aptly focused; very well written and directed. Exceeds requirements.</td>
<td>84%</td>
</tr>
<tr>
<td>A</td>
<td>Distinction-level work: Displays in-depth understanding of material; comprehensive coverage of topic; good evidence of outside reading/research; originality of thought or approach. Enlightening; well-focused; very well written and directed. Exceeds most expected requirements.</td>
<td>74%</td>
</tr>
<tr>
<td>B</td>
<td>Merit-level work: Factually sound (few, if any, minor factual errors); thorough understanding of material; evidence of relevant outside reading/research; some originality of thought or approach. Regular use of effective logical thinking, critical analysis and judgment. Suitably focused; well written and directed. Meets all expected requirements.</td>
<td>64%</td>
</tr>
<tr>
<td>C</td>
<td>Pass-level work: Essentially correct, possibly missing important points, but no serious errors; good understanding of material but tending to be descriptive in approach; limited evidence of outside reading/research. Competently structured and reasonably well focused, but some weaknesses in expression/presentation. Possibly using large amounts of quotations. Meets most expected requirements.</td>
<td>54%</td>
</tr>
<tr>
<td>D</td>
<td>Marginal work: Displays only limited understanding of material; incomplete coverage of topic; some significant factual errors and/or irrelevancies. Entirely descriptive in approach. Poorly structured; lack of coherent argument; difficult to follow. Substantially above or below the word limit. Possibly using excessive amounts of quotations. Meets some of the expected requirements but not all.</td>
<td>44%</td>
</tr>
</tbody>
</table>
**Unsatisfactory work:** Evidence of inadequate effort. Many serious errors / misconceptions / omissions / irrelevancies. Poorly directed at targets. Poorly structured; lack of coherent argument; difficult to follow. Substantially above or below the word limit. Possibly using excessive amounts of quotations.

| F | 0% |

**Table 1: Grade Descriptors**

**Pass marks**
The pass mark for each module is 50%.

**Re-takes**
Marks achieved through re-assessment will be capped at 50% for the purposes of calculating the overall mark and determining classification for an award; The actual mark achieved through reassessment will be the mark recorded on the transcript.

**Final awards**
A **MSc in Big Data Analytics** will be awarded to students who achieve a minimum of 180 credit points and successfully complete a dissertation/research project worth 60 credits (included within the 180 credits).

A **Postgraduate Diploma in Big Data Analytics (Entry Award)** will be awarded to students who achieve a minimum of 120 credit points as per the prescribe programme of study detailed in this programme specification.

A **Postgraduate Certificate in Big Data Analytics (Entry Award)** will be awarded to students who achieve a minimum of 60 credit points as per the prescribe programme of study detailed in this programme specification.

A **Postgraduate Award in Big Data Analytics (Entry Award)** will be awarded to students who achieve a minimum of 30 credit points as per the prescribe programme of study detailed in this programme specification.

A mark of Merit or Distinction will be awarded according to the criteria set out in the University’s Code of Practice on Assessment.

**Criteria for the award of an alternative qualification**
If a student fails to meet the criteria for the award of a Master’s degree, a Postgraduate Diploma or a Postgraduate Certificate, or is unable to complete the programme he or she is registered for, he or she will be eligible for the award of one of the following as an exit qualification:

Postgraduate Award (exit award) – this will be awarded to students who have previously registered for either the Master’s degree or Postgraduate Diploma or Postgraduate Certificate provided that the student has achieved a minimum of 30 credits; the credit may **not** include any dissertation credits.

Postgraduate Certificate (exit award) – this will be awarded to students who have previously registered for either the Master's degree or Postgraduate Diploma provided that the student has achieved a minimum of 60 credits; the credit may **not** include any dissertation credits.

Postgraduate Diploma (exit award) – this will be awarded to students who have previously registered for the Master’s degree provided that the student
has achieved a minimum of 120 credits; the 120 credits may include
dissertation credits to the value of 60 credits.

In the case of the PG Dip, PG Cert and PG Award exit awards, whether the
award should be named or unnamed will be at the discretion of the Board of
Examiners. In this regard the Board of Examiners will be guided by the
combination of modules prescribed in this specification with respect to the
PG Dip, PG Cert and PG Award entry awards. The expectation is that PG
Award exit awards will normally be unnamed.

When selecting modules whose credit is to be counted towards a particular
exit award this will be done in a manner so as to best advantage the
student.

38. **Student representation and feedback:**

Because of the nature of the delivery of the programme, and the world-wide
distribution of the student body enrolled on the programme, physical
participation in a Liverpool-based Staff-Student Liaison Committee (SSLC) is
impracticable. Instead SSLCs, run on similar lines as on-campus SSLCs, are
conducted in the form of teleconferences. SSLCs are held three times a year
prior to each Board Of Studies (BOS) meeting. Each BOS receives a report
from its associated SSLC, these reports are also posted online. Feedback
from each BOS is provided at each subsequent SSLC.

The principal channel for students to communicate with their colleagues and
with staff, in keeping with the medium for programme delivery, is the
Internet. Each module delivered establishes a virtual classroom within which
the module instructor will communicate with students to deliver module
materials, receive coursework assignments and facilitate class discussions.
This mechanism automatically provides a framework for students to share
concerns with their colleagues and with staff, either privately or publicly,
within the class. Other concerns can be raised privately via the student’s
Student Support Manager (SSM). Each student is assigned, for the duration
of his/her studies, a Laureate based SSM whose role includes that of acting
as a personal tutor.

Feedback on the delivery of individual modules is provided through the
completion of a “end of module” questionnaire issued to all students taking
part in the module. A summary of the questionnaire returns is given to the
module instructor, who is asked to comment on this, and any other issues
arising in the delivery of the module, in the form of a report with prescribed
headings. This report may be further augmented by comments from the
module monitor (a member of staff within the Department of Computer
Science at the University of Liverpool). Each module delivery is reviewed by
the Board of Studies, which is provided with the composite module report,
including the questionnaire summary. An overall summary of student
feedback is also presented for consideration at each meeting of the Board of
Studies. These reports are also made available to the Board of Examiners.

---

**Part F: Status of Professional, Statutory or Regulatory Body Accreditation**

39. **Status of Professional, Statutory or Regulatory Body Accreditation:**

British Computer Society (BCS) accreditation pending.
Part G: Diversity & Equality of Opportunity and Widening Participation

40. Diversity & Equality of Opportunity and Widening Participation:

The programme design, structure and content are consistent and compliant with the University’s Diversity and Equality of Opportunity Policy.

ANNEX 1

Annex Of Modifications Made To The Programme

Please complete the table below to record modifications made to the programme.

<table>
<thead>
<tr>
<th>Description of modification (please include details of any student consultation undertaken or confirm that students’ consent was obtained where this was required)</th>
<th>Minor or major modifications</th>
<th>Date approved by FAQSC</th>
<th>Date approved by AQSC (if applicable)</th>
<th>Cohort affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Programme (discussed at SSLC)</td>
<td>Not Applicable</td>
<td>May 2014</td>
<td>September 2014</td>
<td>October 2014</td>
</tr>
<tr>
<td>Name change and restructuring of content (discussed at SSLC)</td>
<td>Major</td>
<td>February 2017</td>
<td>March 2017 (UAP)</td>
<td>March 2017</td>
</tr>
</tbody>
</table>