Course Specification

Course Summary Information		
1	**Course Title**	MSc Big Data Analytics
2	**BCU Course Code**	PT1114
3	**Awarding Institution**	Birmingham City University
4	**Teaching Institution(s)** (if different from point 3)	
5	**Professional Statutory or Regulatory Body (PSRB) accreditation** (if applicable)	BCS

6	**Course Description**
	The MSc Big Data Analytics course will provide you with an insight into areas of data mining, big data management, and advanced statistics. You will develop in-depth practical skills through using tools and techniques from the forefront of the emerging field of data analytics. You will use these to effectively model complex organisational requirements and propose suitable solutions. **What's covered in the course?** The demand for big data analysis and management is continually increasing in business and computer science. For companies it can provide valuable insights, and results such as increased market share, profitability, possible cost savings and procedural efficiency. This course will equip you with the necessary skills to exploit big data tools and methods in order to drive innovation and growth in modern global organisations and society. The learning activities on this Master's in Data Analytics degree are designed to encourage and facilitate your ability to gain employment and sustain a professional career in data analytics - by building your confidence and skills through hands-on experience and structured feedback. The course combines formal lectures and tutor-led workshops with independent study. You will develop key analytical and problem-solving skills, and will gain an aptitude for research, academic writing, and time management. Technology enhanced learning will be used through the provision of online resources and discussion forums. Teaching will be conducted in a work-related context: you will work collaboratively with tutors, researchers, and businesses to prepare you for employment. Potential careers for Big Data Analytics graduates include roles in data science, data warehousing, consultancy, data security and data administration.

7	Course Awards		
7a	**Name of Final Award**	**Level**	**Credits Awarded**
	Master of Science Big Data Analytics Master of Science Big Data Analytics with Professional Placement	7 7	180 240
7b	**Exit Awards and Credits Awarded**		
	Postgraduate Certificate Data Analytics Postgraduate Diploma Big Data Analytics	7 7	60 120

8	Variations from the University Academic Regulations
	This course has approved variations to the University's Academic Regulations. These can be accessed via the student contract page: https://www.bcu.ac.uk/student-info/student-contract

9	Delivery Patterns			
Mode(s) of Study	**Location(s) of Study**	**Duration of Study**	**Code(s)**
Full Time September	City Centre	12 months	PT1114
Full Time January	City Centre	12 months	PT1114
Part Time September	City Centre	20 months	PT1115
Part Time January	City Centre	28 months	PT1191
Full Time January 'with Professional Placement'	City Centre (and placement provider)	18 months	PT1336
Full Time September 'with Professional Placement'	City Centre (and placement provider)	18 months	PT1336

10	Entry Requirements
	The admission requirements for this course are stated on the course page of the BCU website at https://www.bcu.ac.uk/.

11	Course Learning Outcomes
1	Demonstrate knowledge and understanding of the theoretical concepts, processes, tools and technologies that underpin big data analytics and communicate the impact of big data analytics upon an organisation and society as a whole.
2	Analyse the requirements of an organisation and evaluate big data technologies for effective big data solutions.
3	Specify, design, implement and communicate effectively big data solutions utilising appropriate tools and techniques to meet the needs of all stakeholders.
4	Engage in independent learning by systematically researching a topic, synthesising and critically evaluating documents from a variety of web-based and traditional sources.

12 Course Requirements

12a Level 7:

In order to complete this course a student must successfully complete all the following CORE modules (totalling 180 credits):

Module Code	Module Name	Credit Value
CMP7213	Modern Optimisation	20
CMP7205	Applied Statistics	20
CMP7214	Advanced Databases	20
CMP7248	Big Data Management and Analytics	20
CMP7206	Data Mining	20
CMP7202	Web Social Media Analytics and Visualisation	20
CMP7200	Individual Master's Project	60

Level 6:
In order to qualify for the award of MSc Big Data Analytics with Professional Placement, a student must successfully complete all of the Level 7 modules listed above as well as the following Level 6 module:

Module Code	Module Name	Credit Value
PLA6004	Professional Placement	60

12b Structure Diagram

September Level 7 (Full-Time)

Year 1 1st Semester (Sept – Dec)	CMP7205: Applied Statistics (20 credits)	CMP7214: Advanced Databases (20 credits)	CMP7206: Data Mining (20 credits)
Year 1 2nd Semester (Jan – May)	CMP7202: Web Social Media Analytics and Visualisation (20 credits)	CMP7203: Big Data Management (20 credits)	CMP7213: Modern Optimisation (20 credits)
Year 1 3rd Semester (May- Sept)	CMP7200: Individual Master's Project (60 credits)		

January Level 7 (Full-Time)

Year 1 1st Semester (Jan – May)	CMP7202: Web Social Media Analytics and Visualisation (20 credits)	CMP7248: Big Data Management and Analytics (20 credits)	CMP7213: Modern Optimisation (20 credits)
Year 1 2nd Semester (June - Sept)	CMP7205: Applied Statistics (20 credits)	CMP7214: Advanced Databases (20 credits)	CMP7206: Data Mining (20 credits)
Year 2 1st Semester (Sept - Jan)	CMP7200: Individual Master's Project (60 credits)		

September Level 7 (Part-Time)

Year 1 1st Semester (Sept – Dec)	CMP7214: Advanced Databases (20 credits)	CMP7206: Data Mining (20 credits)
Year 1 2nd Semester (Jan – May)	CMP7202: Web Social Media Analytics and Visualisation (20 credits)	CMP7248: Big Data Management and Analytics (20 credits)
Year 2 1st Semester (Sept – Dec)	CMP7205: Applied Statistics (20 credits)	CMP7200: Individual Master's Project (60 Credits)
Year 2 2nd Semester (Jan – May)	CMP7213: Modern Optimisation (20 credits)	
Year 2 3rd Semester (May – Sept)		

January Level 7 (Part-Time)

Year 1 1st Semester (Jan – May)	CMP7202: Web Social Media Analytics and Visualisation (20 credits)	CMP7248: Big Data Management and Analytics (20 credits)
Year 1 2nd Semester (Sept – Dec)	CMP7214: Advanced Databases (20 credits)	CMP7206: Data Mining (20 credits)
Year 2 1st Semester (Jan – May)	CMP7213: Modern Optimisation (20 credits)	CMP7200: Individual Master's Project (60 Credits)
Year 2 2nd Semester (Sept – Dec)	CMP7205: Applied Statistics (20 credits)	
Year 3 3rd Semester (Jan – May)		

Professional Placement January start (Full-Time)

Year 1 1st Semester (Jan – May)	CMP7202: Web Social Media Analytics and Visualisation (20 credits)	CMP7248: Big Data Management and Analytics (20 credits)	CMP7213: Modern Optimisation (20 credits)
Year 1 2nd Semester (Sept – Dec)	CMP7205: Applied Statistics (20 credits)	CMP7214: Advanced Databases (20 credits)	CMP7206: Data Mining (20 credits)
Year 2 1st Semester (Jan – May)	CMP7200: Individual Master's Project (60 credits)		
Year 2 2nd Semester (May – Nov)	Professional Placement (60 credits)		

Professional Placement September start (Full-Time)

Year 1 1st Semester (Sept - Dec)	CMP7202: Web Social Media Analytics and Visualisation (20 credits)	CMP7248: Big Data Management and Analytics (20 credits)	CMP7213: Modern Optimisation (20 credits)
Year 1 2nd Semester (Jan - May)	CMP7205: Applied Statistics (20 credits)	CMP7214: Advanced Databases (20 credits)	CMP7206: Data Mining (20 credits)
Year 2 1st Semester (May - Sept)	CMP7200: Individual Master's Project (60 credits)		
Year 2 2nd Semester (Sept - Jan)	Professional Placement (60 credits)		

13 Overall Student Workload and Balance of Assessment

Overall student *workload* consists of class contact hours, independent learning and assessment activity, with each credit taken equating to a total study time of around 10 hours. While actual contact hours may depend on the optional modules selected, the following information gives an indication of how much time students will need to allocate to different activities at each level of the course.

- *Scheduled Learning* includes lectures, practical classes and workshops, contact time specified in timetable
- *Directed Learning* includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning
- *Private Study* includes preparation for exams

The *balance of assessment* by mode of assessment (e.g. coursework, exam and in-person) depends to some extent on the optional modules chosen by students. The approximate percentage of the course assessed by coursework, exam and in-person is shown below.

Level 7

Workload

% Time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	306
Directed Learning	488
Private Study	1006
Total Hours	1800

Balance of Assessment

Assessment Mode	Percentage
Coursework	86%
Exam	7%
In-Person	8%