



**Birmingham City University**  
**Faculty of Technology, Engineering and the**  
**Environment**

**Postgraduate Programme**

**Programme Specification**

**MSc Business Intelligence**

<b>Date of Course Approval/Review</b>	<b>Version Number</b>	<b>Version Date</b>
<b>5 March 2013</b>	<b>1.0</b>	<b>January 2013</b>

# CONTENTS

Definitive Documents and Version Control .....	1
Programme Specification .....	2
Programme philosophy and aims .....	3
Learning Outcomes .....	4
Learning, teaching and assessment methods.....	6
Programme structure.....	7
Support for Learning.....	8
Criteria for admission .....	8
Methods for evaluation and enhancement of quality and standards .....	9

## Definitive Documents and Version Control

This document has a version number and reference date in the footer.

The process leading to the introduction of new courses, major changes to courses, and minor changes to courses and modules follows the appropriate formal procedure as described in the Faculty's Academic Procedures and Quality Manual.

On the front sheet of this document, the date of course approval/review refers to the most recent full approval/review event. The version date will be that of the most recent event at which formal consideration was given to course changes.

Further details about the course and document development may be obtained from minutes of the approval or minor changes board. A history of the document since the last full approval/review event is summarised in the table below and further information relating to past versions can be obtained from the Faculty Office.

<b>Version</b>	<b>Event</b>	<b>Date of event</b>	<b>Authorised by</b>
1.0	Course Approval	5 March 2013	Associate Dean

# Programme Specification

## MSc Business Intelligence

Date of Publication to Students: September 2013

**NOTE:** This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes advantage of the learning opportunities that are provided. More detail on the specific learning outcomes, indicative content and the teaching, learning and assessment methods of each module can be found (1) at <https://mytid.bcu.ac.uk/>, (2) in the Module Specifications and (3) in the Student Course Guide.

The accuracy of the information contained in this document is reviewed by the University and may be checked within independent review processes undertaken by the Quality Assurance Agency.

<b>Awarding Institution / Body:</b>	Birmingham City University
<b>Teaching Institution:</b>	Birmingham City University
<b>Interim Awards and Final Award:</b>	PGCert, PGDip, MSc
<b>Programme Title:</b>	MSc Business Intelligence
<b>Main field of Study:</b>	Business Intelligence
<b>Modes of Study:</b>	Full Time/Part Time
<b>Language of Study:</b>	English
<b>UCAS Code:</b>	n/a
<b>JACS Code:</b>	G500

### Professional Status of the programme:

The Faculty will seek accreditation of the programme by the British Computer Society (BCS).

Relevant subject benchmark statements and other external reference points used to inform programme outcomes:

- The FHEQ Level Descriptor
- QAA Benchmark statement for Computing
- “Benchmarking Standards for Taught Masters Degrees in Computing”, Committee of Professors and Heads of Computing (CPHC) and the British

### **Programme philosophy and aims**

The MSc Business Intelligence provides students with the opportunity to gain in-depth knowledge and skills in a range of issues and concepts in Business Intelligence. A central theme of the programme is the extraction of information from stored data using a variety of techniques and software tools.

The programme is designed for graduates from relevant technological subject (such as Computer Science, Business Information Technology, as well as subjects areas where statistical analysis is a core subject) and who wish to explore and gain knowledge pertaining to business intelligence and learn about data analytics from a computing perspective. It provide a robust grounding in key principles and tools, together with a strong focus on industrial applications, and will provide a foundation for either further research or a career applying leading edge software analytics technology.

A key aspect of the programme philosophy is that the learning experience integrates use of major commercial software – SAS (data mining and business intelligence), Oracle Databases including the issues associated with distributed data systems.

Students will also learn about the skills needed to become a successful entrepreneur in the IT sector.

The programme is located within the School of Computing, Telecommunications and Networks, which has delivered a wide range of successful masters courses in computing and computing-related areas for many years and provides a stimulating and supportive learning environment.

The School has close and well-established links with industry, ensuring that the programme remains up-to-date and relevant. The School also has close links with SAS the global leaders in Data Analytics and in December 2012 launched the SAS Student Academy. The School co-developed and currently runs the SAS Student Academy Programme which provides training to other educational establishments in SAS software.

The School is located within the Faculty of Technology, Engineering and the Environment in the campus at Millennium Point in the heart of Birmingham. Millennium Point was built as a focus for science, technology and education within Birmingham and the wider region and provides an excellent context for exploring advanced technology.

Graduates from the programme will be equipped for careers in business intelligence and data analytics which includes the analysis and extraction of information from Big Data from any type of industry and business. Graduates will gain high level skills in business intelligence, data analytics, database technology as well as relevant knowledge and skills pertaining to consultancy and entrepreneurship. Students will also be able to proceed to a PhD programme.

**The aims of the programme are to:**

1. Provide a stimulating and rewarding learning experience that will foster the research and independent study skills required at masters level;
2. Develop in-depth knowledge and skills in a range of advanced topics in Business Intelligence, with a particular emphasis on Data Analytics techniques and the issues associated with analysing distributed, multiple format stored data;
3. Develop skills of analysis, synthesis, critical appraisal and the ability to solve complex problems;
4. Enable students to critically assess developments at the forefront of the discipline;
5. Promote an awareness of professional, legal and ethical considerations;
6. Enable students to research, manage data, communicate effectively and work as part of a team, to support career advancement.

**Intended learning outcomes and the means by which they are achieved and demonstrated:**

**Learning Outcomes**

**1. Knowledge and Understanding**

On completion of the course, students should be able to demonstrate:

1. A systematic knowledge and understanding of relevant facts, concepts, theories and principles of Business Intelligence;
2. An understanding of the key technologies used in Business Intelligence;
3. Knowledge of data analytics tools and techniques;
4. An understanding of entrepreneurship in information technology;
5. An awareness of the social, environmental, ethical and regulatory aspects that impinge on the storage and use of stored data.

**2. Intellectual Skills**

On completion of the course, students should be able to:

1. Elicit and analyse the requirements business intelligence strategy;
2. Critically evaluate techniques and methods used in business intelligence and data analytics;

3. Systematically evaluate the suitability business intelligence tools and gain experience in at least one data analytics/business intelligence tool;
4. Systematically extract relevant data from database, integrate and process data from multiple sources ready for data analysis;
5. Critically evaluate the role of the entrepreneur in IT;
6. Argue rationally and draw independent conclusions based on a rigorous, analytical and critical approach to the development and implementation of a business intelligence strategy.

### **3. Practical Skills**

On completion of the course, students should be able to:

1. Select and effectively use the tools, theories and methodologies used in Business Intelligence;
2. Use computing methods, tools and techniques to solve a range of practical problems;
3. Select and use appropriate data analytics software tools;
4. Work effectively as a member of a development team, and undertake management and planning activities, recognising the different roles within a team.

### **4. Transferable/Key Skills**

On completion of the course, students should be able to:

1. Manage learning and self-development, including time management, and prioritise work when tackling and solving complex problems;
2. Communicate effectively in writing, orally and in presentations to specialist and non-specialist audiences;
3. Make effective use of IT, including word and data processing packages, internet and electronic information sources;
4. Systematically research a topic, synthesising and critically evaluating documents from a variety of web-based and traditional sources;
5. In cooperation with others, plan and implement tasks at a professional level and contribute to team goals through making sound judgements.

### **Learning, teaching and assessment methods used**

Knowledge and understanding are acquired through formal lectures, tutor-led seminars and practical activities, and a range of independent learning activities. Emphasis is placed on guided, self directed and student-centred learning with a progressively increasing independence of approach, thought and process. This independent learning includes an element of peer review in order to evaluate the effectiveness of the learning.

Lectures are used to introduce themes, theories and concepts, which are further explored in seminars. Technology enhanced learning is used, where appropriate, through the provision of online resources, discussion forums and other activities. Advanced textbooks are used, together with professional material and journal articles, in order to ensure that students develop a critical understanding of work at the forefront of their discipline. The module guides direct students to a full range of resources, including books and journals, as well as specialised course-based material.

Analytical and problem solving skills are further developed using a range of appropriate 'real' and 'theoretical' case studies and problem-based learning scenarios.

Practical, including lab-based, sessions are used throughout the programme to develop practical skills and to place theory in a work-related context. Where appropriate, students use commercial development environments.

Learners extend research skills ability in the first semester module, Professional Skills and Research Methods, which develops the key skills of research, academic writing and time management required for study at masters level. These skills are further developed and placed into context in the second semester Project Workshop and by undertaking a major individual project.

Transferable/key skills are pervasive and incorporated into modules and assessments as appropriate, e.g. team-working skills are fostered via group activities. Learners are encouraged to plan their own work schedules and are required to meet deadlines. Reflection and self awareness are fostered throughout.

A range of assessment methods are employed, assessment criteria being published in each assignment brief. Knowledge and skills are assessed, formatively and summatively, by a number of methods, coursework, examinations (seen and unseen, open and closed-book), presentations, practical assignments, vivas, online forums, podcasts, and project work.



## Programme structure and requirements, levels, modules, credits and awards

The MSc programme is normally studied over one year full-time or two years part-time (one year and one term full-time for January start). Students may, if they wish, move between full and part-time modes of attendance. The academic year is divided into semesters of approximately 14 weeks each, which run from September to January and January to May.

The course is divided into taught modules of 15 and 30 credits and a Masters project of 60 credits. Students complete 60 credits for Postgraduate Certificate, 120 credits for Postgraduate Diploma and 180 credits for MSc. Each credit represents 10 notional hours of student learning and assessment.

The structure of the course, the module, levels and credit ratings and the awards that can be gained are shown below.

### MSc Business Intelligence

#### Semester C

60 credits			
Masters Project PG			

#### Semester B

(15 credit) Technology Entrepreneurship PG	(15 credit) Data Mining PG	(15 credit) Advanced Databases PG	(15 credit) Applied Advanced Statistics PG
---	----------------------------------	--	---

#### Semester A

(15 credit) Professional Skills and Research Methods PG	(15 credit) Data Analysis PG	(15 credit) Databases for Enterprises PG	(15 credit) Business Intelligence PG
---	---------------------------------------	--	--

### Awards

Postgraduate Certificate awarded after 60 credits achieved

Postgraduate Diploma awarded after 120 credits achieved

Master of Science awarded after the completion of the full 180 credits

## **Support for Learning including Personal Development Planning (PDP)**

Students are encouraged to identify and, with guidance, to reflect on their own learning needs and are offered the following support as appropriate to meet those needs:

- an induction programme dealing with orientation and the dissemination of essential information, including an introduction to PDP;
- a dedicated Learning Centre with open access learning materials, resources and full-time staff specialising in a variety of support areas;
- a course guide (Student Handbook), containing information relating to the University, Faculty, School, course and modules;
- access to administrative staff and to academic staff, including the tutors and Course Director;
- support staff to advise on pastoral and academic issues;
- access to Faculty resources, including a range of IT equipment and the services of, and guidance from, IT support staff;
- access to the University's Student Services, including those offered by the careers service, financial advisers, medical centre, disability service, crèche, counselling service and chaplaincy;
- provision of resources for Professional Development Planning (PDP) to enable reflection on learning, performance and achievement and to plan personal, educational and career development. The university offers a range of on-line courses ([www.moodle.bcu.ac.uk](http://www.moodle.bcu.ac.uk)) to support PDP topics including: Reflection, Career & Employability, Action Planning, Self Awareness and Self Employment.

### **Criteria for admission**

Candidates must satisfy the general admissions requirements of the programme, which are as follows:

Candidates must satisfy the general admission requirements of the programme.

The current admission requirements can be found under the 'Entry Requirements' tab of the web page for this course.

### **Alternative entry routes**

Students who do not hold the standard entry requirements may be considered for admission provided they can demonstrate that their qualifications and/or industrial experience are equivalent to that attained through the completion of an appropriate honours degree programme.

### **English Language requirements**

International applicants are required to have IELTS overall band of 6.0 or equivalent English language qualification.

### **Methods for evaluation and enhancement of quality and standards including listening and responding to views of students**

The following Faculty committees are involved in evaluation and enhancement of quality, standards and student experience:

Board of Studies

Faculty Board and its sub-committees

Learning and Teaching Committee

Academic Standards and Quality Enhancement Committee

Student Experience Committee.

Evaluation processes, in which students are involved, include annual course and module reviews, course review and re-approval events, professional body accreditation visits and external examiner visits. Mechanisms for student input include meetings with course tutors, feedback questionnaires, faculty and university student satisfaction surveys and representation on the committees referred to above.