

MSc Information Management (Big Data in Business) (full-time)
For students entering in 2016/7

Awarding Institution:	University of Reading
Teaching Institution:	University of Reading
Relevant QAA subject Benchmarking group(s):	
Faculty:	Henley Business School at Univ of Reading
Programme length:	12 months
Date of specification:	14/Nov/2016
Programme Director:	Dr Yin Leng Tan
Programme Advisor:	
Board of Studies:	HBS Pre Exp BOS
Accreditation:	British Computer Society (BCS) Professional Certificate in Business Analysis Practice through one of the modules

Summary of programme aims

This programme aims to equip students with key knowledge and skills to design and develop business solutions that involve the alignment of business strategy and technology. Placing 'informatics' – the study of the creation, management and utilisation of information in scientific and economic activities – at its core, it covers business analysis and ICT solutions design to enable students to analyse the problem domain, capture requirements, propose solutions, and evaluate their implications. It treats business and organisation activities as informational and combines conceptual underpinnings based on semiotics and appraisal of information systems and technologies in business, organisational and societal contexts. The programme offers specialisation through the following pathways: Business Analysis and Service Design, Systems Analysis and Design, and Big Data in Business.

Business Analysis and Service Design: The pathway prepares students for strategic use of information and information management for business service design. Service design focuses on business services rather than products or components to achieve composable and agile solutions that lead to service innovation. It also addresses management and leadership issues in service design. Students will be able to apply their knowledge and skills in designing and introducing technology based solutions to application domains in business and management.

Systems Analysis and Design: This pathway prepares students to effectuate management and utilisation of information resources in various domains such as business and management, construction management and healthcare, and solutions design through systems analysis and design methodology. The pathway will enhance students' existing knowledge and skills in key technological and business areas. Students will develop understanding of systems thinking and be able to apply their knowledge and skills in planning, management, design and implementation of IT based solutions such as enterprise systems for business and organisations.

Big Data in Business: This pathway prepares students with knowledge, skills and awareness about the strategic use of very large amounts of data that are constantly being generated – often referred to as 'Big Data' – in business. Use of information and communications technologies (ICT) and cognate technologies in data analytics and processing have enabled organisations to gather a large volume of data. However, without a strategic view to take advantage of the opportunity created by the availability of such data, organisations and businesses would not be able to capitalise on this competitive advantage. In this pathway, students learn to develop a strategic approach to manage Big Data in business, through the analysis of business problems as well as understanding approaches to business intelligence. It intends to produce graduates who have knowledge and skills necessary to understand how Big Data can benefit business and organisations.

Transferable skills

In parallel to subject competence that students are required to acquire from their programme of study, they are expected to enhance their research ability, team work, communication skills, information handling, problem-solving, project management, creativity, and analytical skills. This is achieved through a mix of different methods of teaching and learning (lecture/practical, classroom-based/problem-based, theory-oriented/skill-focused) and different methods of assessments (examination/coursework). A key part of the study programme is the MSc dissertation project in which students will be trained and assessed as specified in the module specification in most of the transferable skills (e.g. independent research, critical analysis and project planning and management).

Students who pass the module INMR66 Business Domain and Requirements Analysis with the mark of 60 or above will be eligible for British Computer Society (BCS) Professional Certificate in Business Analysis Practice.

Programme content

A student must complete all compulsory modules. In addition, optional modules should be undertaken from any application domains to make up the rest of the credits required. The topic of the dissertation project should normally be in the chosen pathway domain.

Compulsory Modules

For all pathways:

<i>Code</i>	<i>Title</i>	<i>Credits</i>	<i>Level</i>
INMR91	Business Informatics	20	7
INMR62	Research Methods	20	7
INMR66	Business Domain and Requirements Analysis	20	7
INMR90	MSc Dissertation (Information Management)	40	7

In addition:

For the pathway Business Analysis and Service Design:

<i>Code</i>	<i>Title</i>	<i>Credits</i>	<i>Level</i>
INMR92	Business Service Design	20	7
INMR65	IT Project Management	20	7

For the pathway System Analysis and Design:

<i>Code</i>	<i>Title</i>	<i>Credits</i>	<i>Level</i>
INMR72	Systems Analysis and Design	20	7
INMR88	Enterprise Systems	20	7

For the pathway Big Data in Business:

<i>Code</i>	<i>Title</i>	<i>Credits</i>	<i>Level</i>
INMR77	Business Intelligence and Data Mining	20	7
INMR89	Big Data in Business	20	7

In addition to core modules, students must choose further optional module so that 180 credits are achieved overall. A complete list of optional modules is available from the Programme Director, and a list of current options can be found in the relevant Programme Handbook. There is no guarantee that in any one year all modules will be available. New optional modules may also be added.

An exemplary list of option modules include (all 20 credits unless stated otherwise):

IT Project Management, Business Service Design, System Analysis and Design, Enterprise Systems, Business Intelligence and Data Mining, Managing Complexity Using Systems Thinking & Strategic Modelling.

For the pathway Big Data in Business, in addition to the above the following may be selected as option modules (all 20 credits unless stated otherwise): Digital Marketing, Data Analytics and Mining (10cr), Big Data Analytics (10cr).

Part-time or modular arrangements

This programme may be studied part-time over three consecutive years.

Progression requirements

A student may undertake an optional module at any time, without necessarily being constrained by the completion of core modules.

The dissertation project can commence after satisfactory completion of the Research Methods module.

Summary of Teaching and Assessment

All the modules may be delivered by a mix of lectures, tutorials and practicals. The support learning will be in forms of email, bulletin board, electronic discussion forum and employment of other e-learning technologies. An assessment of a module will take place at the end of each module.

Three exit points are built into the programme, and a student will be awarded the highest qualification he/she has achieved. A Postgraduate Certificate (PgCert) requires 60 credits; a Postgraduate Diploma (PgDip) requires 120 credits; an MSc requires 180 credits including a dissertation.

Dissertation projects will be conducted by students individually under staff's supervision.

The University's taught postgraduate marks classification is as follows:

Mark	Interpretation
70% - 100%	Distinction
60% - 69%	Merit
50% - 59%	Good standard (Pass)

Failing categories

40% - 49%	Work below threshold standard
0% - 39%	Unsatisfactory Work

For Masters Degree

To pass the MSc students must gain an average mark of 50 or more overall including a mark of 50 or more for the dissertation. In addition the total credit value of all modules marked below 40 must not exceed 30 credits and for all modules marked below 50 must not exceed 55 credits.

Students who gain an average mark of 70 or more overall including a mark of 60 or more for the dissertation and have no mark below 40 will be eligible for a Distinction. Those gaining an average mark of 60 or more overall including a mark of 50 or more for the dissertation and have no mark below 40 will be eligible for a Merit.

For PG Diploma

To pass the Postgraduate Diploma students must gain an average mark of 50 or more. In addition the total credit value of all modules marked below 40 must not exceed 30 credits and for all modules marked below 50 must not exceed 55 credits.

Students who gain an average mark of 70 or more and have no mark below 40 will be eligible for the award of a Distinction. Those gaining an average mark of 60 or more and have no mark below 40 will be eligible for a Merit.

For PG Certificate

To pass the Postgraduate Certificate students must gain an average mark of 50 or more. In addition the total credit value of all modules marked below 40 must not exceed 10 credits.

Admission requirements

Entrants to this programme are normally required to have obtained a 2.1 Honours Bachelors Degree or equivalent; or equivalent experience, subject to the University's APEL rules.

For an applicant whose first language is not English, either a university degree taken in English, or an IELTS 6.5 or equivalent is required. Exceptionally, if an applicant has worked in an English language environment, an English test, organised by the University's CALS, may be conducted in lieu of formal qualifications.

Admissions Tutor: Dr Weizi Li

Support for students and their learning

University support for students and their learning falls into two categories. Learning support is provided by a wide array of services across the University, including: the University Library, the Careers, Placement and Experience Centre (CPEC), In-sessional English Support Programme, the Study Advice and Mathematics Support Centre teams, IT Services and the Student Access to Independent Learning (S@il) computer-based teaching and learning facilities. There are language laboratory facilities both for those students studying on a language degree and for those taking modules offered by the Institution-wide Language Programme. Student guidance and welfare support is provided by Personal Tutors, School Senior Tutors, the Students' Union, the Medical Practice and advisers in the Student Services Centre. The Student Services Centre is housed in the Carrington Building and offers advice on accommodation, careers, disability, finance, and wellbeing, academic issues (eg problems with module selection) and exam related queries. Students can get key information and guidance from the team of Helpdesk Advisers, or make an appointment with a specialist adviser; Student Services also offer drop-in sessions and runs workshops and seminars on a range of topics. For more information see www.reading.ac.uk/student

Transfer between programmes

A student is permitted to transfer between this programme and MSc Business Technology Consulting, subject to the approval by the receiving Programme Director.

Career prospects

This Masters programme is designed to be industry oriented with the possibility of allowing students to carry out in-depth academic enquiries. The prospective students may be fresh graduates or experienced professionals. They can undertake the programme of study on part-time or full-time bases. Given these, it is expected that graduates from this programme will be able to take the following responsibilities either in industry or academia: systems manager, technical manager with IT expertise, IT operation manager, system analyst, software engineer, application architect/developer, project leader, researcher/educator/trainer, quantitative analyst.

Opportunities for study abroad or for placements

Students may carry out their dissertation projects in organisations as part of placement of up to six months in duration. The placement needs to be arranged by students and requires an approval by the Programme Director who ensures that the placement satisfies the requirements of Dissertation.

Programme Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge, understanding, skills, qualities and other attributes in the following areas:

Knowledge and Understanding

A. Knowledge and understanding of:

1. Information Systems (IS) planning and management:
 - 1.1) IS architecture and components
 - 1.2) IS development and methodologies
 - 1.3) Business processes and IS design
 - 1.4) Project management and planning
 - 1.5) Business Service Design, Systems Analysis and Design, or Big Data in Business
2. Practice

Teaching/learning methods and strategies

The course concentrates on aspects 1 and 2. 1.5 is dependent on the pathways selected. All modules collectively will cover the identified scope. Introduction to new concepts as well as the use of practical case studies will enable students to think critically. Aspects 3 and 4 are covered within other modules such as Research Methods and Business Informatics. Emphasis on theory is also placed through research in the dissertation project.

- 2.1) Problem identification and critical analysis
- 2.2) Design, development and evaluation
- 2.3) Management and organisation
- 2.4) Professionalism and ethics
- 2.5) Commercial and industrial exploitation
3. Communication and interaction
4. Theory

Assessment

Knowledge is tested through a mixture of formal examinations and practical work. The dissertation project will also assess the knowledge, understanding and ability of applying them in solving problems.

Skills and other attributes

B. Intellectual skills - *able to*:

1. Demonstrate knowledge and understanding related to aspects outlined above
2. Apply such knowledge and understanding to the formulation of IS solutions
3. Recognise and analyse criteria and specifications appropriate to a specific problem
4. Critically evaluate and test a computer based solution to business problems
5. Reflect and communicate
6. Recognise and conform to appropriate professional, ethical and legal practices

Teaching/learning methods and strategies

1 and 2 as above. 3, 4 and 5 will be taught as part of the core modules, and will be exercised in the dissertation. The Options will also address these aspects. 6 will be taught in the modules on Business Informatics and Research Methods.

Assessment

These skills are tested through a mixture of formal examinations and practicals. The dissertation will also assess these skills.

C. Practical skills - *able to*:

1. Analyse business problems, specify business requirements
2. Specify, design and propose IS solutions
3. Evaluate the solutions
4. Recognise risks and safety aspects
5. Communicate, present and disseminate the solutions

Teaching/learning methods and strategies

1, 2, 3 will be covered in Business Informatics and other related modules. Both are present as the cores. 3 will be also addressed in the Research Methods module. 4 and 5 will be covered in the Research Methods module and the Dissertation Project.

Assessment

Skills 1 to 5 will be assessed by a mixture of practical work and examination.

D. Transferable skills - *able to*:

1. Independent research, including planning and management
2. Literature research
3. Time management
4. Critical analytical skills
5. Communication and presentation in a professional manner
6. Technical documentation in English

Teaching/learning methods and strategies

1 will be covered in all modules as each student is required to conduct a substantial amount of independent study before and after the intensive study blocks. 1, 2, 3 and 4 will be addressed in the dissertation project. 5 and 6 will be addressed in the Research Methods Module and the Dissertation Project. 6 will be addressed in all modules, especially in the course work.

Assessment

All will be assessed by examination, practical work and dissertation.

Please note - This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the module description and in the programme handbook. The University reserves the right to modify this specification in unforeseen circumstances, or where the process of academic development and feedback from students, quality assurance process or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.