MSc Applied Informatics
For students entering in 2009

Awarding Institution:	University of Reading
Teaching Institution:	University of Reading
Faculty:	Henley Business School
Programme length:	12 months (full time), 36 months (part-time)
Date of specification:	November 2008
Programme Director:	Prof Kecheng Liu
Board of Studies:	Informatics MScs
Accreditation:	Accreditation from the British Computer Society will be sought

Summary of programme aims

The programme aims to offer opportunities to local and international students entering postgraduate education at high standards. It will prepare students for effective management and utilisation of information resources in various domains such as business and management, biology and bio-diversity, computing, construction management, financial prognosis, and healthcare at postgraduate level. The programme will enhance students' existing knowledge and skills in key technological and business areas. Students will be able to apply their knowledge and skills in planning, management, design and implementation of IT based solutions to different application domains.

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).

Programme content

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.

The MSc programme offers four specialisations: Biodiversity Informatics, Computing Informatics, Construction Informatics, and Health Informatics.

A student on each specialisation will complete all core modules (i.e., common core modules and specialist core modules). Optional modules (i.e., specialist optional modules or any other common optional modules) can be undertaken to make up the rest of the credits required. The student must also complete a dissertation of the chosen specialisation.

A student on a specialisation must complete all common core modules, and specialist core modules where such modules exist. In addition, he or she can take options from any specialist areas. The topic of the dissertation project must be in the chosen specialist area.

		Credits	Level
Common core modules			
INMR61	*Applied Informatics*	20	7
INMR62	*Research Methods*	20	7
INMR64	*Dissertation*	60	7
Specialist Modules			
Biodiversity Informatics core modules			
PSMB2D	*Phylogeny: Building and Using Evolutionary Trees*	20	7
PSMBF8	*Biodiversity Information Systems*	20	7
Computing Informatics core modules			
INMR66	*Business Domain and Requirements Analysis*	20	7
INMR62	*Systems Analysis and Design*	20	7
Construction Informatics core module			
CEMIB1	*Concepts, Strategy and Management*	20	7
Health Informatics core modules			
INMR66	*Business Domain and Requirements Analysis*	20	7
HCMS02	*Policy and Practice in Health and Social Care*	20	7

In addition to core and specialist core modules, students must choose further optional modules 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 optional modules include:

- Biodiversity Informatics - *Modelling Patterns in Biodiversity* (PS)
- Construction Informatics - *Facilities Management* (CE), *Design Management and Briefing* (CE)
- Health Informatics - *Dependable Information Systems* (IN), *Public Health* (HC), *Leadership in Healthcare* (HC)

An exemplary list of common optional modules: *IT Project Management, Systems Analysis and Design, Enterprise IT Architecture, Business Intelligence and Data Mining, Distributed Communications and Middleware, Social and Legal Issues in Computers and Communication, Enterprise Resource Planning Systems,* and *Business Communications and Negotiations.*

IN modules are offered by Informatics Research Centre. Other modules are offered by other Schools: PS – School of Biological Sciences; CE – School of Construction Management & Engineering; HC – School of Health & Social Care.

Part-time/Modular arrangements

This programme may be studied part-time over three consecutive years. This programme can be started in October or in January.

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. Each module will be delivered in a week of concentrated teaching, followed by a week of supported learning. The support learning will be in forms of email, bulletin board, electronic discussion forum and employment of other e-learning technologies. An examination of a module will take place at the end of each module.

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

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 Degrees
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 Diplomas
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 in related fields; 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.

Support for students and their learning

University support for students and their learning falls into two categories. Learning support includes IT Services, which has several hundred computers and the University Library, which across its three sites holds over a million volumes, subscribes to around 4,000 current periodicals, has a range of electronic sources of information and houses 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 the Student Services Centre. The Student Services Centre is housed in the Carrington Building and includes the Careers Advisory Service, the Disability Advisory Service, Accommodation Advisory Team, Student Financial Support, Counselling and Study Advisors. Student Services has a Helpdesk available for enquiries made in person or online (www.risisweb.reading.ac.uk), or by calling the central enquiry number on (0118) 378 5555. 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 on everything from accommodation to finance. The Carrington Building is open between 8:30 and 17:30 Monday to Thursday (17:00 Friday and during vacation periods). Further information can be found in the Student Diary (given to students at enrolment) or on the Student website (www.reading.ac.uk/student).

Transfer between programmes

A student is permitted to transfer between this programme and the MSc Business Informatics programme and the MSc Informatics (Beijing) programme, subject to the approval by the receiving Programme Director. Transfer of a dissertation project, after it commences, is normally not permitted.

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 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

Placement is not required in the programme of study, though students can conduct their dissertation projects in business organisations, which needs to be arranged by the students.

Educational aims of the programme

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills, qualities and other attributes in the Programme Outcomes.

Programme Outcomes

Knowledge and Understanding

A. Knowledge and understanding of:	Teaching/learning methods and strategies
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 intelligence analysis 2. Practice 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	The course concentrates on aspects 1 and 2. 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 Research Methods and Informatics. Students of MSc in Informatics place more emphasis on Theory through research in the dissertation project. *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 Professional Issues 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 construct 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 both in the business and IT 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.

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D. Transferable skills – able to:	**Teaching/learning methods and strategies**
1. Independent research, including planning and management	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.
2. Literature research	1, 2, 3 and 4 will be addressed in the dissertation project.
3. Time management	5 and 6 will be addressed in the Research Methods Module and the Dissertation Project.
4. Critical analytical skills	6 will be addressed in all modules, especially in the course work.
5. Communication and presentation in a professional manner	
6. Technical documentation in English	*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 processes or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.