

## **MRes/Postgraduate Certificate in Informatics For students entering in 2009**

|                        |                                                                |
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| Awarding Institution:  | University of Reading                                          |
| Teaching Institution:  | University of Reading<br>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. Emphasis will also be placed on identification of relevant research topics, conducting independent research and publish their work.

### **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 MRes 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).

### **Postgraduate awards**

Two 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; an MRes requires 180 credits including a dissertation.

A student on the MRes programme will complete three core modules and two optional modules in order to fill the knowledge and skills gap so that a dissertation of the chosen area can be pursued effectively.

### **Programme content**

A student on a specialisation must complete all core modules and two optional modules.

|                     |                            | <i>Credits</i> | <i>Level</i> |
|---------------------|----------------------------|----------------|--------------|
| <b>Core modules</b> |                            |                |              |
| INMR61              | <i>Applied Informatics</i> | 20             | 7            |
| INMR62              | <i>Research Methods</i>    | 20             | 7            |
| INMR63              | <i>Dissertation</i>        | 100            | 7            |

Students must choose two optional modules to the value of 40 credits. 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 *IT Project Management, Business Domain and Requirements Analysis, Systems Analysis and Design, Organisational Design and Management of Information, Enterprise IT Architecture, Business Intelligence and Data Mining, Social and Legal Issues in Computers and Communication, Enterprise Resource Planning Systems, Concepts, Strategy and Management (CE), and Biodiversity Information Systems (PS)*.

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.

### **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 MRes 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 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.\*

\* The provision to permit a candidate to be passed overall with a profile containing marks below 40 is made subject to the condition that there is evidence that the candidate applied his or herself to the work of those modules with reasonable diligence and has not been absent from the examination without reasonable cause.

### **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](http://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](http://www.reading.ac.uk/student)).

### **Transfer between programmes**

A student is permitted to transfer between this programme and the programme delivered at Beijing Institute of Technology in Beijing, subject to a satisfactory assessment of the modules undertaken by the receiving programme's advisor and the final approval by the 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 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.

### **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*

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <p><b>A. Knowledge and understanding of:</b></p> <ol style="list-style-type: none"><li>1. Information Systems (IS) planning and management:<ol style="list-style-type: none"><li>1.1) IS architecture and components</li><li>1.2) IS development and methodologies</li><li>1.3) Business processes and IS design</li><li>1.4) Project management and planning</li><li>1.5) Business intelligence analysis</li></ol></li><li>2. Practice<ol style="list-style-type: none"><li>2.1) Problem identification and critical analysis</li><li>2.2) Design, development and evaluation</li><li>2.3) Management and organisation</li><li>2.4) Professionalism and ethics</li><li>2.5) Commercial and industrial exploitation</li></ol></li><li>3. Communication and interaction</li><li>4. Theory</li></ol> | <p><b>Teaching/learning methods and strategies</b></p> <p>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.</p> <p>Aspects 3 and 4 are covered within other modules such Research Methods and Informatics. Students of MRes Informatics place more emphasis on Theory through research in the dissertation project.</p> <p><i>Assessment</i></p> <p>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.</p> |
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### *Skills and other attributes*

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| <p><b>B. Intellectual skills – able to:</b></p> <ol style="list-style-type: none"><li>1. Demonstrate knowledge and understanding related to aspects outlined above</li><li>2. Apply such knowledge and understanding to the formulation of IS solutions</li><li>3. Recognise and analyse criteria and specifications appropriate to a specific problem</li><li>4. Critically evaluate and test a computer based solution to business problems</li><li>5. Reflect and communicate</li><li>6. Recognise and conform to appropriate professional, ethical and legal practices</li></ol> | <p><b>Teaching/learning methods and strategies</b></p> <p>1 and 2 as above.</p> <p>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.</p> <p>6 will be taught in the modules on Professional Issues and Research Methods.</p> <p><i>Assessment</i></p> <p>These skills are tested through a mixture of formal examinations and practicals. The dissertation will also assess these skills.</p> |
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**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.

**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 processes or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.**