

MRes in Agriculture and Food For students entering in 2012/3

Awarding Institution:	University of Reading and University of Birmingham
Teaching Institution:	University of Reading and University of Birmingham
Relevant QAA subject Benchmarking group(s):	
Faculty:	Life Sciences Faculty
Programme length:	6 years
Date of specification:	30/Aug/2012
Programme Director:	Dr Richard Frazier
Programme Advisor:	Ms Madeleine Smith
Programme Advisor:	Dr Serafim Bakalis
Board of Studies:	University of Reading and University of Birmingham Joint Board of Studies for Food Advanced Training Partnership Programmes (RAF)
Accreditation:	

Summary of programme aims

This part-time modular programme is structured to deliver advanced research skills and knowledge within the context of Food Quality and Health to food and agricultural industry professionals. A major proportion of the programme consists of an independent research project and dissertation that is carried out in the workplace. The taught programme aims to provide a depth of knowledge across a broad base of issues relevant to overlapping sub-themes of nutrition, health and the consumer, food quality and regulation, food manufacture and sustainable food production. The programme therefore delivers training that crosses traditional skill disciplines within the fields of food and agricultural science, and aims to encourage critical reflection upon existing scientific literature and current state-of-the-art research findings toward the planning and execution of original industry-based research.

A key aspect is that the programme is sufficiently flexible to cater for the varying needs of the industry professionals, particularly to enable them to pursue their course of study without the need to leave employment. Consequently, taught modules will be delivered as intensive study weeks together with distance learning as appropriate to learning outcomes.

Advanced training partnership background: This programme will be delivered by the Food Advanced Training Partnership (Food ATP). The Food ATP is one of four ATPs that have been established with funding from the Biotechnology and Biological Sciences Research Council (BBSRC). An ATP operates under the leadership of an academic institution and is a formal collaboration between users (i.e. industry) and providers (i.e. universities and other research/training organisations) of high-level skills in the agri-food sector with the aim to train industry professionals to equip them with skills to ensure that the UK continues to make significant contributions towards national and global food security. The Food ATP is led by the University of Reading in partnership with the University of Birmingham, Leatherhead Food Research and Rothamsted Research.

Joint degree programme: This programme leads to a MRes qualification that is jointly accredited and awarded by the University of Reading and University of Birmingham. Participants will be registered as students at both institutions.

Transferable skills

The Food ATP brings together leading experts, training providers and successful companies to deliver a unique training experience that will enhance and strengthen the UK food and agricultural industry skills base. The mission of the Food ATP is to adopt a without boundaries approach to developing the advanced skills required to develop the leaders of a sustainable food industry. By integrating all aspects of the food chain the Food ATP will breakdown traditional barriers between food production, processing, retailing, food service, nutrition and the consumer to address major issues at the heart of food security. Within this interdisciplinary context there will be considerable scope for the development of the following transferable skills:

- Critical evaluation of information from a variety of sources to develop understanding and make decisions
- Collaboration with experts and policy makers across a wide range of disciplines and organisations
- Designing and executing an independent research project based on an original hypothesis
- Managing resources as appropriate to deliver project aims

- Effective and scientifically rigorous communication of scientific information in oral and written formats
- Monitoring of own learning and development

Programme content

For the award of MRes, students will conduct a 120 credit research project or portfolio of research on a topic(s) approved by the ATP Director and the research project supervisor(s). The research project runs for the entire duration of the MRes and is conducted within the student's workplace with access to facilities within the Food ATP.

Taught modules (60 credits) will be delivered as intensive study weeks (typically 1 week for a 10 credit module) combined with distance learning as outlined in individual module descriptions. Distance learning via a virtual learning environment (VLE) will be used to deliver learning materials prior to contact time and to support directed private study and coursework assignments taken prior to and after contact time. Students are required to take three core modules as listed in the table below. Optional taught modules may be chosen from the available modules being taught within the Food ATP as part of the MSc in Food Quality and Health programme, but they should be relevant to, or complementary to, the student's research project/portfolio and selected with the agreement of the ATP Director and research project supervisor(s).

The indication of themes within the list of optional modules is for guidance only; there is no requirement to take modules from within any specific theme or combination of themes for the award of MRes.

Compulsory modules (150 credits):

Code	Title	Credits	Level
FZMATPR01	Sustainable supply systems	10	7
FZMATPB02	Fundamentals of Food Processing	10	7
FZMATPR05	Research methods and project management	10	7
FZMATPP01	Research project / portfolio	120	7

Optional modules (30 credits):

Code	Title	Credits	Level
	<i>Nutrition, health and the consumer theme:</i>		
FZMATPR02	Diet quality and health	10	7
FZMATPR04	Consumer behaviour and food marketing	10	7
	<i>Food quality and regulation theme:</i>		
FZMATPB05	Food flavour	10	7
FZMATPB07	Food standards and labelling	10	7
	<i>Food manufacture theme:</i>		
FZMATPB01	Food hygiene legislation for the food industry	10	7
FZMATPB03	Developing food structure by thermal processing	10	7
FZMATPB04	Hygienic food processing	10	7
	<i>Sustainable food production theme:</i>		
FZMATPR03	Risk analysis in the food chain	10	7
FZMATPB06	Food chain security	10	7

Part-time or modular arrangements

The MRes programme can be taken on a part-time basis over a maximum of eight years; however, the typical duration of study is anticipated to be 2-3 years. The taught modules may be taken in any order agreed with the Programme Director. The total credit weighting of the MRes programme is 180 credits, where 1 credit represents 10 hours of student effort spent on learning activities (including research studies), which includes all forms of study, contact time (including project supervisor meetings), preparation of assignments, revision and assessment.

Progression requirements

To qualify for the award of MRes, students must achieve an overall weighted mean average mark of 50 or more in taught modules (60 credits), a mark of 50 or more for their dissertation, and have no taught module mark below 40. Students will be subject to an annual review in order to monitor their progress with respect to their research project and taught modules. For the annual review, students will be required to prepare an interim report on the progress of their research project and plans for future work. This report and taught module results to date will be reviewed by a panel consisting of the academic and industrial supervisor and the ATP Director or

their deputy. The panel has the option to refer cases of neglect of work or unsatisfactory progress to the appropriate University-level Committees should progress not be satisfactory. In this eventuality, the Committee will decide the most appropriate course of action and will follow normal University procedures. The Committee could recommend eligibility for a lesser award.

Students who successfully complete the MRes programme are qualified to progress to the related Professional Doctorate in Agriculture and Food (DAgriFood); however, they may leave the Food ATP programme only with one qualification.

Summary of Teaching and Assessment

The teaching is organised in taught modules (totalling 60 credits) and a research project module (120 credits). Taught modules involve a combination of lectures, tutorials, workshops, seminars, practical sessions, all delivered as an intensive study week blended with distance learning where appropriate to learning outcomes. Taught modules are assessed by coursework assignments, including essays, case studies, oral presentations and module examinations, as specified in individual module descriptions.

Feedback on taught module assessment will be provided by a variety of means dependent on the context of the assignment. For example, written feedback on distance learning modules will be provided via virtual learning environment assessment tools, whereas feedback on oral presentations will be a mix of verbal and written feedback. However, in all cases feedback will address performance against assessment criteria, including transferable skills.

The assessment of the research project/portfolio of research and professional practice is based on a written dissertation and oral presentation of the work undertaken followed by a *viva voce* examination. The written dissertation will be independently assessed by two examiners from within the Food ATP.

Mark Interpretation:

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

Failing categories:

40-49%	Below threshold standard
0-39%	Unsatisfactory work

To qualify for Distinction, students must pass all modules and gain an overall weighted mean mark of 70 or more over 180 credits, a weighted mean mark of 65 or more in the taught module components, and a mark of 65 or more for the dissertation.

To qualify for Merit, students must pass all modules and gain an overall weighted mean mark of 60 or more over 180 credits, a weighted mean mark of 55 or more in the taught module components, and a mark of 55 or more for the dissertation.

To qualify for Passed, students must gain an overall weighted mean mark of 50 or more over 180 credits and a mark of 50 or more for the dissertation, and must not have any module mark below 40.

Admission requirements

Entrants to this programme are normally required to have obtained a 2(i) class honours first degree or better; or an alternative qualification of equivalent academic standing; in a relevant science or engineering subject.

All applicants will be required to produce a research project proposal and will be interviewed prior to admission. For applicants with prior learning and prior experiential learning the policy and procedure for the Assessment of Prior (Experiential) Learning (AP(E)L) will be followed. Applicants who do not meet the requirement of a 2(i) class honours degree, but can demonstrate commensurate professional experience will be considered for admission.

Admissions Tutor: Dr R. A. Frazier (Programme Director, University of Reading)

Support for students and their learning

University support for students and their learning falls into two categories and is provided at both Universities.

University of Reading: Learning support is provided by a wide array of services across the University of Reading, including: the University Library, the Student Employment, Experience and Careers Centre (SEEC),

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. 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

University of Birmingham: Learning support is the responsibility of Academic Services at the University of Birmingham, which is responsible for providing support and advice to all students to enable them to undertake their responsibilities effectively and efficiently. Learning support available includes: Library Services, the Careers and Employability Centre, the Centre for Learning and Academic Development (CLAD), which provides a range of support including ICT training, in-sessional English support through the English for International Students Unit (EISU), and the Skills4Campus interactive study skills resource. Student guidance and welfare support is provided by a dedicated Student Support team and offers advice that includes: accommodation, disability support, emergencies and security, and money matters. For more information see www.as.bham.ac.uk/support/index.shtml

Career prospects

The Food ATP programme offers an innovative approach to the delivery of training to the food and agricultural industries, and is intended for early to mid-career professionals seeking to deepen their understanding of scientific and technical issues relevant to their career progression. Food ATP participants will be employed in the food and agricultural industries and will remain in this employment throughout the course and thereafter. The skills and capabilities developed through the programme are expected to enhance their career progression within their professions. Food ATP participants will benefit through access to the knowledge and skills base that underpins the development of the industry, and through establishing peer networks. This is increasingly important in maintaining the competitive edge of the UK food and agricultural industry as the market becomes more internationally competitive. Food ATP participants have the opportunity to continue their studies to the award of a Professional Doctorate upon successful completion of the MRes.

Opportunities for study abroad or for placements

Students will be able to undertake the 120 credit project module at any approved institutional or industrial participant in the Food ATP, dependent on appropriate supervisory arrangements being in place. The food and agricultural industry operates globally and therefore there may arise opportunities for study abroad within the context of the project module.

Programme Outcomes

Typically, holders of the qualification will have the qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and largely autonomous initiative in complex and unpredictable situations, in the food and agricultural industries or equivalent environments. In particular, successful ATP Associates will gain the following knowledge, understanding and skills:

Knowledge and Understanding

A. Knowledge and understanding of:

- A1. Advanced concepts and techniques in scientific disciplines relevant to the food and agricultural industries
- A2. Research methods and study design
- A3. Project planning and management
- A4. Advanced research and related methods in applied agri-food research and professional practice
- A5. Background scientific, technical, commercial and policy literature
- A6. Relevant professional issues

Teaching/learning methods and strategies

- Reflection on research findings and related course materials (A1-A6)
- Academic supervision and teaching (A1-A6)
- Small group discussions (A6)
- Case studies/problem-based learning (A1-A6)
- Distance learning (A1, A5, A6)
- Professional experiences (A1-A4, A6)

Assessment

- Research project dissertation (A1-A6)
- Coursework assignments (A1-A6)

Skills and other attributes

B. Intellectual skills - *able to*:

- B1. Think logically and evaluate critically research and advanced scholarship in the discipline
- B2. Plan and implement tasks at a professional level to solve problems related to the discipline
- B3. Evaluate methodologies and where appropriate propose new hypotheses
- B4. Plan, conduct and write a report on an independent research project
- B5. Relate systematic evidence to issues arising in professional practice

Teaching/learning methods and strategies

Activities based on research, related course materials, reading, participating in seminars and workshops (B1-B3, B5)
Research project (B1-B5)

Assessment

Research project dissertation (B1-B5)
Coursework assignments (B1,B2, B5)

C. Practical skills - *able to*:

- C1. Apply, or adapt, experimental methodology safely and accurately
- C2. Devise experimental methods appropriate for testing a hypothesis
- C3. Interpret quantitatively the results of experiments undertaken by themselves or others
- C4. Use statistical and related methods to objectively evaluate data and draw conclusions
- C5. Access wide range of literature and data using bibliographic and IT skills
- C6. Communicate scientific ideas and conclusions to different audiences across disciplines

Teaching/learning methods and strategies

Activities based on course materials and related research and readings (C1-C6)
Assignment preparation for taught modules (C3-C6)
Research project (C1-C6)

Assessment

Research project dissertation (C1-C6)

D. Transferable skills - *able to*:

- D1. Communicate scientific concepts and results orally and in writing to scientific and non-scientific audiences
- D2. Critically evaluate information from a variety of sources to develop understanding and make decisions
- D3. Project planning and management
- D4. Data analysis
- D5. Report writing

Teaching/learning methods and strategies

Discussion with instructors, supervisors and peers (D1)
Research project (D1-D5)

Assessment

Coursework assignments (D1, D2, D4)
Literature reviews (D2)
Project dissertation (D1-D5)

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.