

DAGriFood 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:	8 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 Partnerships Programmes (RAF)
Accreditation:	

Summary of programme aims

The Professional Doctorate in Agriculture and Food aims to offer agricultural and food industry employed professionals with the opportunity to develop their professional roles and to implement an independent programme of research within the workplace. The programme provides an award at doctorate level that is distinct from a traditional PhD award and is directly relevant to the needs of the individual's professional work setting. The Professional Doctorate in Agriculture and Food programme is structured to deliver the opportunity to acquire advanced research skills and taught knowledge of the theme Food Quality and Health. 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. To link the taught and research elements of the programme, participants will produce a reflective portfolio of professional practice to demonstrate the relevance of learning and skills development to their own professional context. The programme therefore delivers training that crosses traditional skill disciplines within the fields of food and agricultural science, together with the opportunity to engage in critical reflection upon existing scientific literature and current state-of-the-art research findings toward the planning and execution of original industry-based research. Graduates of the programme will acquire cognitive, practical, professional and transferable skills to enable them to assume leadership roles within the industry. 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 part-time 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 Professional Doctorate (DAGriFood) qualification that is jointly accredited and awarded by the University of Reading and University of Birmingham.

Transferable skills

The Food ATP programme 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 and dissemination 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 or portfolio of research based on an original hypothesis
- Effective and scientifically rigorous communication of scientific information and experimental conclusions in oral and written formats
- Managing human, financial and physical resources as appropriate to achieve project aims
- Monitoring of own learning and development to identify learning needs and to plan and manage their acquisition
- Reflective and self-critical approach to research and professional development
- Professional and intellectual skills to deliver leadership, inspiration and motivation of others

Programme content

For the award of DAgriFood, students will design and conduct an independent research project leading to a thesis on a topic(s) approved by the ATP Director and the research project supervisor(s). The research project can run for the entire duration of the DAgriFood and is conducted within the student's workplace with access to facilities within the Food ATP. Taught module contact time 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 undertaken prior to and after contact time. 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. To link the taught and research components of the programme, students will be required to produce a reflective portfolio of professional practice to demonstrate their application of learning and research skills training within the workplace.

The optional modules are grouped in four themes and students will be required to take at least one 10 credit module from each theme.

Compulsory modules (30 taught credits + research project + portfolio of professional practice):

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
FZMATPP04	Portfolio of professional practice	60	8
FZMATPP03	Research project	360	8

Optional modules (90 taught 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 DAgriFood programme can be taken on a part-time basis over a maximum of eight years; however, the typical duration of study will be 4-6 years. The taught modules may be taken in any order agreed with the Programme Director. The total credit weighting of the DAgriFood programme is 540 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 DAgrriFood, the student must achieve an overall weighted mean of at least 50 in taught modules (120 credits) with no module mark below 40.

At six monthly intervals there will be a formal review of the research project by the supervisory team. Progress will be assessed and where there is concern about the student's progress a formal action plan will be drawn up and agreed between the student, academic and industrial supervisors and the ATP Director.

At the end of each year there will be an annual review of the student's progress, for which the student will be required to produce a progress report to include a future training and research plan with timescales. An Annual Review Panel that includes academic and industrial supervisors and the ATP Director or their deputy will conduct the annual review. The annual review of student's progress will include consideration of the module results from the taught modules taken to date, with the requirement that attainment is to an overall weighted mean of 50 in taught modules. The Annual Review 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.

Summary of Teaching and Assessment

Taught modules involve a combination of lectures, tutorials, workshops, seminars, practical sessions, all delivered as intensive study, and distance learning. Taught modules will be assessed by coursework assignments, including essays, case studies, and oral presentations, as specified in individual module descriptions. Taught module assessments will be classified as below:

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

The assessment of the portfolio of professional practice and research project is based on a written portfolio and thesis, respectively, and an oral presentation of the work undertaken followed by a *viva voce* examination. The written portfolio and thesis are independently assessed by a panel comprising three examiners, including one external examiner.

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. Entry to this programme is also possible by progression from the related MSc in Food Quality and Health or MRes in Agriculture and Food; however, only one final qualification will be awarded.

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 that 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 Richard Frazier (ATP Director)

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-session 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-session 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

Graduate Schools:

Both the University of Reading and University of Birmingham have established institution-wide Graduate Schools that provide programmes of short courses/seminars to provide the opportunity for targeted skills development for research students. Research students can access this programme according to a Training Needs Analysis to identify their individual requirements. For more information see <http://www.reading.ac.uk/graduateschool/> or <http://www.graduateschool.bham.ac.uk/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. The 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 the career progression of the participants 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.

Opportunities for study abroad or for placements

Students will be able to undertake their research project at any approved institutional or industrial partner that is a member of 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.

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. Global food security issues and their impact on the food and agricultural industries

Teaching/learning methods and strategies

- Reflection on course materials and related research findings (A1-A8)
- Academic-led teaching and supervision (A1-A7)
- Small group work discussion (A2, A7, A8)
- Case studies/problem-based learning (A1-A3, A6,

A3. Background scientific, technical, commercial and policy literature
 A4. Theory and practice of research methods and study design, and related ethical and governance frameworks
 A5. Project planning and management
 A6. Advanced research and related methods in applied agri-food research and professional practice
 A7. Current professional developments within their field of work
 A8. Critical reflection on own learning and professional development

A7)
 Distance learning (A1-A4)
 Professional experiences (A4-A8)

Assessment
 Coursework assignments (A1-A7)
 Reflective portfolio of professional practice (A7, A8)
 Research project thesis (A1-A6)

Skills and other attributes

B. Intellectual skills - *able to*:

B1. Think logically and evaluate critically research and advanced scholarship in the discipline in order to challenge current concepts and approaches and, where appropriate, propose new hypotheses
 B2. Formulate questions, critically appraise, synthesise and evaluate evidence so as to transfer knowledge into practice
 B3. Plan and implement tasks at a professional level to solve problems related to their discipline
 B4. Critically evaluate methodologies with respect to a plan of investigation and demonstrate awareness of any constraints or limitations
 B5. Plan, conduct and write a doctoral thesis on an independent research project
 B6. Relate systematic evidence to issues arising in professional practice

Teaching/learning methods and strategies

Activities based on taught course materials, related research, reading, participating in seminars and workshops (B1, B2, B6)
 Self-directed learning activities associated with research project (B1-B6)

Assessment
 Coursework assignments (B1-B4)
 Research project thesis (B1-B5)
 Reflective portfolio of professional practice (B3, B6)

C. Practical skills - *able to*:

C1. Apply, adapt, or develop practical methodology to address a specific experimental aim
 C2. Interpret quantitatively the results of experiments undertaken by themselves or others
 C3. Devise experimental methods appropriate for tackling a particular problem
 C4. Provide authoritative solutions when presented with practical or research problems within a professional context
 C5. Use statistical and related methods in a professional context
 C6. Access and critically evaluate a wide range of literature and data using bibliographic and IT skills
 C7. Communicate to different audiences the relevance, novelty and outcomes of their research
 C8. Demonstrate the relevance and innovative aspects of their research in relation to professional field of work

Teaching/learning methods and strategies

Activities based on course materials and related research and readings (C1-C6)
 Assignment preparation for taught modules (C2-C6)
 Academic-led practical exercises (C1-C3, C5)
 Research project work (C1-C8)

Assessment
 Coursework assignments and project thesis will report the results of such activities (C1-C8)

D. Transferable skills - *able to*:

D1. Critically evaluate and disseminate information from a variety of sources to develop understanding and make decisions

Teaching/learning methods and strategies

Course materials (D1, D4)
 Discussion with instructors, supervisors and peers (D1-D5)

D2. Collaborate with experts and policy makers across a wide range of disciplines and organisations

D3. Design and execute an independent research project or portfolio of research based on an original hypothesis

D4. Effectively communicate scientific information and experimental conclusions in oral and written formats with scientific rigour

D5. Manage human, financial and physical resources as appropriate to achieve project aims

D6. Monitor own learning and development to identify learning needs and to plan and manage their acquisition

D7. Demonstrate a reflective and self-critical approach to research and professional development

D8. Deliver leadership, inspiration and motivation of others

Presentations at workshops (D4)

Professional practice (D1-D8)

Research project (D1-D8)

Assessment

Coursework assignments (D1, D4)

Literature reviews (D1, D4)

Project thesis (D1-D5)

Reflective portfolio of professional practice (D2, D5-D8)

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.