

MSc Sustainable Food Quality for Health (part-time flexible)
For students entering in 2017/8

Awarding Institution:	University of Reading
Teaching Institution:	University of Reading
Relevant QAA subject Benchmarking group(s):	
Programme length:	5 years
Date of specification:	15/Aug/2017
Programme Director:	Prof Carol Wagstaff

Summary of programme aims

Master of Science in Sustainable Food Quality for Health (MSc) programme aims to offer food industry employed professionals the opportunity to develop their professional roles and to implement an independent programme of research within the workplace.

The MSc programme consists of a Masters level research project conducted in the workplace coupled with a flexible taught component of postgraduate training in science, technology, engineering and research practice.

The taught component, which is common to all programmes (MSc, PGDip and PGCert) aims to provide a depth of understanding at the cutting edge of current knowledge across a broad base of disciplines relevant to the modern food industry. The programmes have been designed as flexible, modular training to allow for part-time study to enable participants to balance study with work. For the programme with a research component (MSc), training in research skills and the practice of research is fundamental, particularly the critical evaluation of research findings and the skills required for planning and execution of original research appropriate to a professional context.

For the MSc award, to link the taught and research elements of the programme, participants will have the opportunity to produce a reflective portfolio of professional practice of research to demonstrate the relevance of learning and skills development to their own professional context.

A flexible pathway of programmes delivers training that crosses traditional skill disciplines within the fields of food and agricultural science, and the masters programme brings the opportunity to engage in critical reflection upon existing scientific literature and current state-of-the-art research findings towards the planning and execution of original industry-based research. Graduates of the programmes will acquire cognitive, practical, professional and transferable skills to enable them to assume leadership roles within the industry.

These programmes are delivered through the AgriFood Training Partnership (AFTP), which was established with funding from the Biotechnology and Biological Sciences Research Council (BBSRC) following the success of the Food Advanced Training Partnership which preceded it. The AFTP is a formal collaboration between university, industry and research partners to foster the development of high-level skills in the agri-food sector.

Overall, the AFTP programmes aim to:

- Provide learning opportunities at the cutting edge of knowledge relevant to career development of professionals working in the food industry.
- Provide flexible learning pathways that allow for time constraints and changing strategic needs of the food industry.
- Support the enhancement of personal scholarship and professional development of students to increase their personal impact in the workplace.
- Encourage research-based solutions to challenges facing the modern food industry.
- Encourage food industry employers to become partners in developing their employees' scientific, technical and professional skills.

Transferable skills

Participants are encouraged to act independently in planning tasks with the use of feedback to reflect on their performance and assess the appropriateness of current levels of knowledge and skill. Participants are expected to acquire an ability to think analytically, to develop frameworks for considering and resolving complex problems and to discriminate between persuasive and unpersuasive arguments. In addition, participants will be used to presenting arguments (both technical and general) orally and in writing and should be able to present such arguments clearly and concisely. Participants will be able to research a variety of sources in libraries and on the internet, and, in particular, to research and assess academic literature. Particular elements of the programme expose participants to the use of information technology and encourage the development of general professional capabilities, including recognition of deadlines and effective time management.

On completion of all programmes, participants should be able to demonstrate:

- Monitoring of own learning and development to identify learning needs and to plan and manage their acquisition

- Effective and scientifically rigorous communication of scientific information in oral and written formats
- Critical evaluation of information from a variety of sources to develop understanding and make decisions

On completion of the MSc programme, participants should be able to demonstrate:

- Designing and executing an independent research project or portfolio of research based on an original hypothesis
- Managing human, financial and physical resources as appropriate to achieve project aims
- Effective time-management and prioritisation of work tasks

Programme content

The programmes are modular and designed to be completed by part-time study.

The minimum duration of study for the award of Master of Science is 1 year and the maximum duration is 5 years. Participants combine a modular taught component with a research component including a work-based research project leading to a Masters level thesis with a total of 180 credits for the programme.

The minimum duration of study for the awards of Postgraduate Diploma or Post Graduate Certificate is 1 year and the maximum duration of study is 6 years. Participants undertake a taught component only. For the award of Postgraduate Certificate participants must acquire 60 taught credits and 120 taught credits for the award of Postgraduate Diploma.

Normally, any learning or assessment completed as *ad hoc* modules must have been completed in the five years prior to initial registration for a programme qualification in order to be eligible for Recognition of Prior Learning (RPL).

The research components are core to the MSc programme, for which participants will design and conduct an independent research project leading to a thesis on a topic(s) approved by the Programme Director and the research project supervisor(s).

The project(s) is conducted within the participant's workplace with additional access to facilities and expertise within the AFTP. The project will be supervised by at least one academic supervisor (a permanent member of academic staff at the awarding institution) and one company-based supervisor. Supervisors will be approved by the awarding institution and may be drawn from any department that is appropriate for the content of the project e.g. science, economics, law, social sciences. The project proposal will be developed by the student in consultation with supervisory team and must be agreed before work commences. The project proposal document can form part of the *Portfolio of Professional Practice of Research*, a reflective portfolio that records the impact of the participant's research and taught learning within the workplace and on their individual professional practice, if the student wishes to complete this.

It is a requirement for the award of MSc that participants complete *Principles and Practice of Research in Industry*, which is a 60 or 80 credits unit of study including a work-based research project, a taught module in *Research Method* which contributes to the total number of taught credits studied. Participants take taught modules and/or a *Portfolio of Professional Practice of Research* for the remainder of their credits.

The *Principles and Practice of Research in Industry* unit is not a component of the PG Diploma or PG Certificate programmes.

For all programmes, participants select their elective taught credits from a list of optional modules which are grouped by linking thematic pathways. The total number of credits required are dependent on the programme of study and the modules chosen being subject to agreement with the Course Tutor, and the Programme Director or Advisor. Taught modules are delivered in a blended learning format that comprises of distance learning via a virtual learning environment (VLE) to support, in many instances, an intensive residential study week of 3-5 days.

The credit requirements for each programme are standardised at 60 credits for a PG Certificate, 120 credits for a Diploma and 180 credits (of which 100 or 120 are taught) for an MSc, but there is some flexibility as to how these can be achieved. There are, however, two core modules for the MSc programme.

Core Modules Principles and Practice of Research in Industry (MSc programme only)

Code	Title	Credits	Level
FZMR05	Research Methods and Project Management	10	7
FZMRP1	Work-based Research Project	60	7

Participants who have undertaken an equivalent 10 credit module to Research Methods at another institution and are able to demonstrate to the satisfaction of the Programme Tutor that the learning outcomes are appropriately matched will be exempt from this module.

Optional Module and Pathway Selection

Participants select their optional modules from a list available from the AFTP administrative office subject to agreement by the Programme Director.

Optional Modules are grouped into the following thematic *pathways*:

- *Sustainable Practices in Food Production*
- *Nutrition, Food and the Consumer*
- *Managing Risk and Food Safety*
- *Food Structure for Health and Quality*

Participants wishing to take a programme of study without a specific pathway may choose their elective modules from across all thematic pathways, subject to agreement by the Programme Director.

Up to a maximum of 50% of the total taught credits may be selected from an extended list of optional modules delivered by partner Higher Education Institutions from within the AgriFood Training Partnership. In a few cases, there are modules available at different institutions with significantly overlapping content and students *will not be permitted to take two modules with substantially similar content to count towards a single qualification*. Module exclusions are provided on relevant module description forms.

These additional modules will be made available to the participants as and when they are approved by the Board of Studies for the School of Chemistry, Food and Pharmacy, University of Reading and the UoR-AFTP Teaching and Learning Forum. Participants will be able to select from this extended list subject to discussion with, and approval, from the AFTP tutor and/or the Programme Director or advisor.

As part of their optional credits, participants may complete modules selected from the *Flexible Learning Plan*. This is a unique aspect of this programme, which allows participants to agree a learning route with the AFTP tutor to acquire skills and training that supports their personal and professional needs. Participants may elect to complete *only one* of the *Personal Learning* modules, that which is most appropriate to their personal, academic and professional needs and subject to agreement with the course tutor. This *Flexible Learning Plan* allows for flexibility of learning pathways, including study of taught modules selected from other UK Higher Education institutions or from other approved training providers.

Further module options will become available subject to individual module approval by the Board of Studies. The full list of optional modules for all pathways above are available from the AFTP administrative office. Participants undertaking a pathway may apply for the pathway at the point of entry or at a later stage if they have fulfilled all of the requirements.

All module selections are subject to availability in any given year and to timetabling constraints.

Pathways:

To qualify for MSc with Sustainable Practices in Food Production (in addition to the core modules listed above), or to qualify for PG Dip or PG Cert with Sustainable Practices in Food Production, participants must take:

APMA107 *What is Sustainability?* 10 credits

and at least 30 credits from the list of modules below:

APMA108 *Livestock, Livelihoods and Food Security* 10 credits

APMA109 *Agri-Food Value Chains* 10 credits

FZMR09 *Sustaining Quality in Raw Material Supply Chains* 10 credits

FZMR17 *Sustainable Supply Systems: Part 1 - Production to Processing* 5 credits

FZMR18 *Sustainable Supply Systems: Part 2 - Manufacturing to Retail* 5 credits

FZMR19 *Fresh Produce Post Harvest Quality Management* 10 credits

The remaining credits will be taken from the list of optional modules available from the AFTP administrative office.

To qualify for MSc with Food, Nutrition and the Consumer (in addition to the core modules listed above), or to qualify for PG Dip or PG Cert with Food, Nutrition and the Consumer participants must take:

FZMR14 *What is Lifelong Nutrition?* 10 credits

and at least 30 credits from the list of modules below:

FZMR15 *Nutrition for a Changing Body* 5 credits

FZMR16 *Nutrition for Specific Populations* 5 credits

FZMR02 *Diet Quality and Health* 10 credits

FZMR06 *Flavour from Farm to Fork and Beyond* 10 credits

FZMR04 *Understanding and Influencing Consumer Behaviour* 10 credits

The remaining credits will be taken from the list of optional modules available from the AFTP administrative office.

To qualify for MSc with Managing Risk and Food Safety (in addition to the core modules listed above), or to qualify for PG Dip or PG Cert with Managing Risk and Food Safety, participants must take:

FZMR03 Risk Analysis in the Food Chain 10 credits

and at least 20 credits from the list of modules below:

FZMR10 Understanding and Implementing European Union Food Law 10 credits

FZMR12 UK Food Law - The Basics 5 credits

FZMR13 International Food Law - The Basics 5 credits

FZMR11 Keeping the Customer Informed 10 credits

Part-time or modular arrangements

The programmes are delivered as a part-time modular programme to deliver a total of 180 credits for the Masters award, 120 credits for the post graduate diploma award and 60 credits for the post graduate certificate award. One academic credit represents 10 hours of participant effort spent on learning activities, which includes all forms of study, taught contact time, preparation of assignments, revision and assessment. Participants are required to enrol online every subsequent year of study whether they elect to take modules or not.

The taught and research components of the programmes are intended to fit within the participant's existing workload with additional study as required.

To qualify for the award of MSc, PGDip or PGCert, the participant must achieve an overall weighted mean of at least 50 in taught modules with no module mark below 40.

Where a participant has failed to achieve the required module mark they will, subject to agreement from the Programme Director, be eligible to re-submit their assignments, in line with the University's Policies and Procedures. The deadline for re-submission will be limited to 6 months. Where a participant fails to re-submit their work within this time period or without following the university's policies and procedures for extenuating circumstances they will have been deemed to have failed to meet the requirements for the programme.

Progression requirements

MSc, PG Dip & PG Cert

The progression of participants registered on the programme will depend on their accrual of sufficient credits at a satisfactory level of attainment and will be monitored via personal tutors and the School of Chemistry, Food & Pharmacy's board of studies. Participants may exit the programme with one of the three awards of PgCert, PgDip or MSc.

Participants who successfully complete the MSc taught programme are qualified to progress to the related Professional Doctorate in Agriculture and Food (DAgriFood); however, they will exit the programme only with one award, being the highest level of qualification attained.

Individual modules are available to be taken as standalone continuing professional development (CPD) activities accredited by the IFST. Accreditation by IFST enables registered participants to meet the CPD requirements of IFST member or Chartered Scientist status.

Summary of Teaching and Assessment

The teaching is organised in taught modules and portfolios and for the MSc a work-based research project module. Taught modules involve a combination of lectures, tutorials, workshops, seminars, practical sessions, delivered as blended learning including face-to-face teaching and 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. The assessment of the research project module is based on a written report and presentation of the work undertaken. Feedback on assessment will be provided by 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 following provide a classification guide for each module with the final degree classification being determined in accordance with the procedures of the University of Reading which can be found in full at:

<http://www.reading.ac.uk/web/FILES/exams/PGclassification-post-2008.pdf>

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

Admission requirements

To qualify for entry to this programme, applicants must fulfil the following requirements:

- The applicant has obtained an undergraduate honours degree in the 1st or 2nd class range, or international equivalent, in a relevant pure or applied science, technology or engineering subject.
- A minimum of one year of relevant full-time work experience.

Applicants who do not meet the academic requirement, but can demonstrate commensurate professional experience will be considered for admission to study toward a PgCert from which they may then transfer to MSc/PgDip status given satisfactory performance. 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.

All applicants may be interviewed prior to admission.

Admissions Tutor: Dr Carol Wagstaff (Programme Director)

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, In-sessional English Support Programme, the Study Advice and Mathematics Support teams and IT Services. 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 Support Centres. If a student has a general enquiry and is unsure where to seek help, they should visit their Support Centre. There are five Support Centres across the University, including one based at the London Road Campus. The Support Centre will be able to advise on matters such as extenuating circumstances, module selection, suspensions, withdrawals, timetable queries and transferring programme. The Support Centre will also be able to signpost students to Carrington building where other University services related to disability, financial support, counselling and wellbeing, accommodation and careers can be found. More information on what student services are available can be found here: <http://student.reading.ac.uk/essentials>.

Career prospects

This 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. 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 students within their professions. 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 the 60 credit project module at any approved institutional or industrial participant in the 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. The Portfolio of Personal Learning may include study abroad subject to approval by the programme director.

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 students will gain the following knowledge, understanding and skills:

Knowledge and Understanding

A. Knowledge and understanding of:

Teaching/learning methods and strategies

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
 A3. Background scientific, technical, commercial and policy literature
 A4. Research methods and study design
 A5. Project planning and management
 A6. Current professional developments within field of work

Reflection on course materials and related research findings (A1-A6)
 Academic led teaching and supervision (A1-A6)
 Small group work discussion (A2, A6)
 Case studies and problem-based learning (A1-A6)
 Distance learning (A1-A3)
 Professional experiences (A5, A6)

Assessment

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

Skills and other attributes

B. Intellectual skills - *able to*:

B1. Think logically and evaluate critically research and advanced scholarship across disciplines
 B2. Plan and implement tasks at a professional level to solve problems related to the agricultural and food industry sectors
 B3. Relate systematic evidence to issues arising in professional practice
 B4. Plan, conduct and write a report on an independent research project

Teaching/learning methods and strategies

Activities based on taught course materials, related research, reading, participating in seminars and workshops (B1-B3)
 Research project (B4)

Assessment

Coursework assignments (B1-B3)
 Research project dissertation (B1-B4)

C. Practical skills - *able to*:

C1. Apply, or adapt, practical instructions safely and accurately
 C2. Interpret quantitatively the results of experiments undertaken by themselves or others
 C3. Devise experimental methods appropriate for tackling a particular problem
 C4. Use statistical and related methods in a professional context
 C5. Access wide range of literature and data using bibliographic and IT skills
 C6. Communicate ideas and conclusions clearly and effectively to specialist and non-specialist audiences

Teaching/learning methods and strategies

Activities based on taught course materials and related research and readings (C1-C6)
 Assignment preparation for taught modules (C2-C6)
 Academic-led practical exercises (C1)

Assessment

Assignments and dissertation will report the results of such activities (C1-C6)

D. Transferable skills - *able to*:

D1. Monitor own learning
 D2. Communicate orally and in writing with scientific rigour
 D3. Critically evaluate information from a variety of sources to develop understanding and make decisions
 D4. Project planning and management
 D5. Data analysis
 D6. Report writing

Teaching/learning methods and strategies

Discussion with instructors, supervisors and peers (D1, D2)
 Taught course materials (D2-D6)
 Presentations at workshops (D2, D5)
 Research project (D1-D6)

Assessment

Coursework assignments (D1-D3, D5)
 Literature reviews (D2, D3, D5)
 Project dissertation (D2-D6)

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.