

MSc / Postgraduate Diploma in Nutrition and Food Science **For students entering in October 2009**

Awarding Institution:	University of Reading
Teaching Institution:	University of Reading Faculty of Life Sciences
Programme length:	12 months
Date of specification:	July 2009
Programme Director:	Dr G K Grimble
Board of Studies:	MSc Programmes in Food Science, Food Technology – Quality Assurance, and Nutrition and Food Science

Summary of programme aims

This MSc programme is for those wishing to develop a career in food-related research or the food industry and focuses on the interface between human nutrition and food science. The expected outcomes are that students should acquire and be able to demonstrate:

- an understanding of the subjects at the interface between human nutrition and food science.
- an understanding of the chemical behaviour and physical properties of food constituents in the context of their manufacture and storage, particularly from the standpoints of safety and nutrition.
- a capacity to undertake research in nutrition.
- a critical approach to understanding of diet and health issues, the implications for public health and impact on the food chain and associated industries.
- a broad range of transferable employment and interpersonal skills.

Transferable skills

As part of this programme students are expected to gain or enhance their experience and competences in the following skills: IT (word-processing, use of spreadsheets and databases, use of Web resources), scientific writing, oral presentations, team working, problem solving, use of library resources and time management.

Programme content

MSc students will follow the modules given below making 180 credits; PG Diploma students will take 120 credits (normally excluding the Project).

Compulsory Modules (MSc 170-credits / PG Diploma (110-credits))

<i>Mod Code</i>	<i>Module Title</i>	<i>Credits</i>	<i>Level</i>	<i>Term(s)</i>
AS2B1	Statistics and Epidemiology for Life Sciences	10	5	Aut
FBMFCA	Chemistry of Food Components A	10	7	Aut
FBMFCA	Chemistry of Food Components B	10	7	Spr
FBMFM1	Introductory Food Microbiology	10	7	Aut
FBMFPR	Project	60	7	Sum
FBMFS1	Sensory Properties of Foods	10	7	Spr
FBMN01	Fundamentals of Human Nutrition	10	7	Aut
FBMN02	Metabolism	10	7	Aut
FBMN03	Research Methodology	10	7	Spr
FBMN04	Public Health Science	10	7	Spr
FBMN05	Genes, Lifestyle and Nutrition	10	7	Spr
FBMN06	Nutrition in Health and Disease	10	7	Aut

Optional modules (10-credits)

FBMFM3	Microbial Quality Assurance	10	7	Spr
FB3CN1	Clinical Nutrition	10	6	Spr
FBMN07	Food Choice and Regulation	10	7	Spr

Part-time/Modular arrangements

The modules may be taken on a part-time basis over a maximum of 3 years. Modules FBMN01, FBMN02, FBMFCA, FBMFCB and FBMN06 will normally be taken during year 1.

Progression requirements

Diploma/MSc Students meeting the requirements to pass the Diploma may proceed to the MSc at the discretion of the Head of School.

See appended progression requirements for students following a post-experience certificate.

Summary of teaching and assessment

The teaching is organised in modules (totalling 180 credits) that involve a combination of lectures, tutorials, workshops, seminars, and practical sessions. Modules taken during the autumn and spring term (120 credits) will be assessed by a mixture of course work and formal examinations. The assessment of the remaining 60 credits, which will be based on a practical project or dissertation, will be based on a written report of the work undertaken.

The University's taught postgraduate marks classification is as follows:

<u>Mark</u>	<u>Interpretation</u>
70 – 100%	Distinction
60 – 69%	Merit
50 – 59%	Good standard (Pass)
<u>Failing categories:</u>	
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 (in 180 credits) 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 overall (in 120 credits). 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**.

* 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 an honours degree in a Pure or Applied Biological Science or an equivalent qualification. Applicants whose academic qualifications do not meet these requirements may in the first instant be admitted to a post-experience course; they may then transfer to MSc status if their performance during the first term is satisfactory.

Admissions Tutor: Dr D J Jukes

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).

Career prospects

An MSc degree in Nutrition and Food Science provides a strong platform from which to undertake a wide range of careers, particularly relating to diet and health, in industry, government and education. Our MSc graduates are highly valued for their problem-solving skills and their ability to apply their scientific training to formulate nutrition policy in governmental and commercial arenas, as well as in food-product development. Some students choose to apply their research skills by pursuing a higher degree through research or through research and development in industry.

Opportunities for study abroad or for placements

Students will be able to undertake the 60 credit project module at an approved institution or an appropriate industrial concern, but this will depend on having the necessary linguistic skills, finding a suitable placement, and appropriate supervisory arrangements being in place.

Educational aims of the programme

Nutrition	Identify the current issues in nutrition, including consumer concerns impinging on product development in the food industry and influencing nutrition policy.
Science Base of Nutrition	Through a knowledge of metabolism in humans and the relationships between diet and disease, to critically appraise epidemiological and experimental data used in deriving dietary recommendations aimed at reducing risk of chronic disease.
Food Chemistry	Apply knowledge of the physical and chemical behaviour of food constituents in the context of the manufacture and storage, and in relation to safety and nutritional attributes.
Food Microbiology	Identify and establish control procedures for all important food pathogens and food spoilage microorganisms. Be informed on microorganisms involved in food fermentation.
Sensory Analysis	Acquire and apply knowledge of sensory tests for the assessment of food quality and consumer preference.

Optional courses include:

Microbial Quality Assurance	Be able to participate in a Hazard Analysis Critical Control Point study and, using modern methods for the assessment of foods through recognised sampling and laboratory techniques, be able to assess the microbial contamination of foods.
Food Choice and Regulation	Be able to (a) describe the main factors that influence food choice and outline the degree and impact of factors that influence food behaviour; (b) outline the effect of government and community campaigns and commercial advertising strategies on individual food choice; (c) describe the main elements of UK, EU and international food regulation and, with particular reference to health and nutrition, identify and explain current and future legal requirements
Clinical Nutrition	Be able to (a) critically evaluate the scientific literature on the effect of nutrition on disease on the effect of disease on nutrition; (b) illustrate the role of nutritional support including enteral and parenteral feeding; (c) describe commonly occurring clinical conditions in various age groups where nutrition plays an important role in both cause and effect e.g. coeliac disease and cystic fibrosis; (d) define and determine the nutritional requirements for patients and describe methods of delivering adequate nutrition.

Programme Outcomes

Knowledge and Understanding

<p>A. Knowledge and understanding of:</p> <ol style="list-style-type: none">1. the concepts and methodologies of nutrition to allow critical awareness of their application in devising appropriate diets or food products for target populations.2. the concepts and techniques of the application of food science to allow the application of nutritional principles to complex food systems in food manufacture	<p>Teaching/learning methods and strategies</p> <p>The knowledge required is provided in formal lectures supported by practical work, seminars and presentations.</p> <p>Feed back on student work is provided by the discussion and return of work in tutorials and seminars. All practical work is marked and returned to the student.</p> <p><i>Assessment</i></p> <p>Most knowledge is tested through a combination of coursework, including oral presentations, and formal examinations, plus a written report of a practical based project.</p>
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Skills and other attributes

<p>B. Intellectual skills – able to:</p> <ol style="list-style-type: none">1. think logically and evaluate critically research and advance scholarship in the discipline2. plan and implement tasks at a professional level to solve problems related to the discipline3. evaluate methodologies and where appropriate propose new hypotheses4. plan, conduct and write a report on an independent practical project.	<p>Teaching/learning methods and strategies</p> <p>Logical application of science and the critical appraisal of methodology are essential parts of the role of a Nutritionist/Food Scientist in the commercial, governmental and research domains. These skills will underpin the lectures, practical and project work.</p> <p><i>Assessment</i></p> <p>1-3 are assessed directly and indirectly in most parts of the course 1-4 are assessed in the final project report.</p>
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C. Practical skills – able to:

- 1 apply, or adapt, practical instructions safely and accurately
- 2 carry out a variety of experimental procedures in the laboratory or human investigation unit.
- 3 interpret quantitatively the results of experiments undertaken by themselves or with others
- 4 devise experimental methods appropriate for tackling a particular problem

Teaching/learning methods and strategies

A range of detailed or outline practical instructions are used to allow students to develop a range of practical skills.

Staff and postgraduate demonstrators are present during practical sessions to guide and help, to mark their reports and give feedback on their work.

Students will work on their project under the guidance of one or more members of staff.

Assessment

1-4 are assessed to different extents by the practical work associated with the various modules undertaken.

D. Transferable skills – able to:

- 1 make use of IT (word processing, spreadsheets, web sources)
- 2 communicate scientific ideas
- 3 give oral presentations
- 4 work as part of a team
- 5 use library resources
- 6 manage time

Teaching/learning methods and strategies

The use of IT is embedded throughout the programme, but is particularly addressed in a non-modular Introductory Course and in modules: FBMFM1, FBMN03, FBMN06 and FBMNG1
Team work is essential in the practical and role play sessions associated with modules: FBMFC1, FBMN02, FBMN04
Library resources are addressed in the first term modules and during the project and dissertation work.

Time management is essential for the timely and effective completion of the programme.

Assessment

1-5 contribute to assessed coursework during the first two terms.

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.

Appendix

Progression from Post-experience certificate to MSc course

Candidates admitted to a post-experience course and have followed the MSc programme during the Autumn term may, at the discretion of the Head of School, transfer to the MSc programme if their performance in the December/January School examination is satisfactory. The registration being back dated to the beginning of the Academic year.