

## Programme Specification

**BSc Food Science with Foundation**

**For students entering Foundation year in September 2027**

**UCAS Code: D611**

**UFFDSCWFY**

**This document sets out key information about your Programme and forms part of your Terms and Conditions with the University of Reading.**

|                                |                                                                            |
|--------------------------------|----------------------------------------------------------------------------|
| Awarding Institution           | University of Reading                                                      |
| Teaching Institution           | University of Reading                                                      |
| Length of Programme            | 4 years                                                                    |
| Accreditation                  | Institute of Food Science and Technology (IFST)                            |
| QAA Subject Benchmarking Group | Agriculture, Horticulture, Forestry, Food, Nutrition and Consumer Sciences |

### Programme information and content

The programme aims to provide you with a degree-level education from which graduates can enter a career in the food industry (or employment in other sectors of the food chain or related scientific sectors) as scientists and to develop their capacity to undertake research into the science of foods. Students will learn to integrate the scientific disciplines relevant to food and to apply and communicate scientific knowledge to meet the needs of industry and the consumer for the production and marketing of safe and quality foods.

|                              |                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Foundation year:             | The goal of Year 0 is to provide you with the basic core knowledge required for your chosen pathway and the confidence to make a successful transition to Higher Education. This is achieved through the provision of high quality teaching, which is sympathetic to the needs of students from a wide range of educational backgrounds.                                           |
| Part 1:                      | Part 1 introduces you to the foundations of the degree, with a strong focus on fundamental science modules such as physiology, chemistry and microbiology, but also quantitative skills, an introduction to food science and awareness of the food system and food industry. The modules in Part 1 ensure that students have sufficient knowledge to underpin their later studies. |
| Part 2:                      | Part 2 provides you with different aspects of food sciences, in particular food composition, processing, food microbiology and food quality. Moreover, an introduction to human nutrition will provide a better understanding of the link between food science, nutrition and health.                                                                                              |
| Placement/Study abroad year: | Students may be permitted to transfer to a programme with Study Abroad / Placement Year.                                                                                                                                                                                                                                                                                           |
| Part 3:                      | Part 3 gives you the opportunity to apply your knowledge to the development of a new food product and your research project (dissertation). You will also be able to deepen your knowledge and understanding of food chemistry, quality and safety.                                                                                                                                |

## **Programme Learning Outcomes - BSc Food Science with Foundation**

During the course of the Programme, you will have the opportunity to develop a range of skills, knowledge and attributes (known as learning outcomes) For this programme, these are:

|    | <b>Learning outcomes</b>                                                                                                                                                         |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Develop a sound understanding of the chemical, microbiological, processing and nutritional aspects in the context of food quality and safety.                                    |
| 2  | Solve new problems by applying knowledge, designing experiments to test hypotheses and critically analysing and interpreting data in respect to scientific literature available. |
| 3  | Plan, conduct and report on an individual research project.                                                                                                                      |
| 4  | Perform chemical, physical, microbiological, sensory, and clinical nutrition laboratory tests to assess the quality and safety of foods.                                         |
| 5  | Demonstrate the ability to participate in food product development programmes and assess the effect of food in human health.                                                     |
| 6  | Implement quality assurance procedures and appropriate legislation to ensure the production of safe and quality foods.                                                           |
| 7  | Work as an individual and as part of a small group or in teams to solve a research question.                                                                                     |
| 8  | Critically assess and present data using appropriate statistical techniques and making effective use of information technology.                                                  |
| 9  | Evaluate the wider consequences of food chain activities and identify ways to minimise any harmful effects on the environment and on people.                                     |
| 10 | Effectively communicate information related to food science at a level and in a format appropriate to the needs of both specialist and non-specialist target audiences.          |

You will be expected to engage in learning activities to achieve these Programme learning outcomes. Assessment of your modules will reflect these learning outcomes and test how far you have met the requirements for your degree.

To pass the Programme, you will be required to meet the progression or accreditation and award criteria set out below.

In addition to the learning outcomes stated above if you are on a placement or study abroad programme you will have the opportunity to develop the following learning outcome:

| <b>Additional Learning outcomes</b> |  |
|-------------------------------------|--|
| N/A                                 |  |

## **Module information**

Each part comprises 120 credits, allocated across a range of compulsory and optional modules as shown below. Compulsory modules are listed.

### **Foundation modules:**

| Module | Name                                                                         | Credits | Level |
|--------|------------------------------------------------------------------------------|---------|-------|
| BI0FB1 | Foundation Biology 1                                                         | 20      | 0     |
| BI0FB2 | Foundation Biology 2                                                         | 20      | 0     |
| CH0AS1 | Academic and Scientific skills: Foundations for Tackling Global Challenges 1 | 20      | 0     |
| CH0AS2 | Academic and Scientific skills: Foundations for Tackling Global Challenges 2 | 20      | 0     |
| CH0FC1 | Foundation Chemistry 1                                                       | 20      | 0     |
| CH0FC2 | Foundation Chemistry 2                                                       | 20      | 0     |

### Part 1 Modules:

| Module | Name                                                 | Credits | Level |
|--------|------------------------------------------------------|---------|-------|
| CH1GCB | General Chemistry B                                  | 20      | 4     |
| FB1BOB | Food and Nutritional Chemistry: a Practical Approach | 20      | 4     |
| FB1FSC | Food System Challenges                               | 20      | 4     |
| FB1MIC | Food Microbiology                                    | 20      | 4     |
| FB1NBP | Nutritional Biochemistry and Physiology              | 20      | 4     |
| FB1SFM | Introduction to Sustainable Food Manufacturing       | 20      | 4     |

### Part 2 Modules:

| Module | Name                                                    | Credits | Level |
|--------|---------------------------------------------------------|---------|-------|
| FB2CPF | Composition and Properties of Foods                     | 20      | 5     |
| FB2FM2 | Food Spoilage, Preservation and Hazards                 | 20      | 5     |
| FB2JOB | Securing a Job: Recruitability and Employability Skills | 0       | 5     |
| FB2NRP | Nutrition for Research and Practice                     | 20      | 5     |
| FB2PQA | Food Processing and Quality Assurance                   | 20      | 5     |
| FB2SCS | Sensory and Consumer Science                            | 20      | 5     |

Remaining 20 credits will be made up of optional modules provided by the Department of Food and Nutritional Science or modules from an approved list.

If you take a year-long placement or study abroad, Part 3 as described below may be subject to variation.

### Part 3 Modules:

| Module | Name                             | Credits | Level |
|--------|----------------------------------|---------|-------|
| FB3AQS | Advanced Food Quality and Safety | 20      | 6     |
| FB3FCP | Food Chemistry and Perception    | 20      | 6     |
| FB3NPD | New Product Development          | 20      | 6     |
| FB3PFB | Research Project                 | 40      | 6     |

Remaining 20 credits will be made up of optional modules provided by the Department of Food and Nutritional Science or modules from an approved list.

## **Placement opportunities**

N/A

## **Optional modules:**

The optional modules available can vary from year to year. An indicative list of the range of optional modules for your programme can be found online in the Course Catalogue. Details of optional modules for each part, including any additional costs associated with the optional modules, will be made available to you prior to the beginning of the Part in which they are to be taken and you will be given an opportunity to express interest in the optional modules that you would like to take. Entry to optional modules will be at the discretion of the University and subject to availability and may be subject to pre-requisites, such as completion of another module. Although the University tries to ensure you are able to take the optional modules in which you have expressed interest this cannot be guaranteed.

## **Teaching and learning delivery:**

You will be taught through a wide range of approaches to teaching and learning in our programmes, spanning from seminars to workshops, practical classes, but also problem-based learning and flipped-classroom type methods. These aim to maximise your engagement and accommodate students with different learning styles. The latter ensures that our teaching is diverse and inclusive, as our students are from a wide variety of different backgrounds with very different learning experiences. Within the design of the programmes, we aim to incorporate time for you to reflect on your learning.

You are taught throughout the programme by highly research-active staff who are able to ensure that you learn about current research in their discipline. In the final year project, many of you will be involved in cutting-edge research projects and become an integral part of the different research groups within the department.

We use pedagogies appropriate to the discipline with a student-centred learning paradigm. This means that our main role is to guide and facilitate your learning and provide experience-based learning opportunities. In applied sciences, such as Food Science, active learning has a crucial role. You are expected to be active learners and contribute to the learning process, building knowledge and understanding in response to opportunities provided. You will develop your existing knowledge in order to achieve deeper levels of understanding, allowing you to analyse, evaluate and synthesize ideas. Our teaching is informed by the concept of constructive alignment, ensuring that the components of the teaching system are aligned to each other.

Elements of your programme will be delivered via digital technology.

The scheduled teaching and learning activity hours and amount of technology enhanced learning activity for your programme will depend upon your module combination. In addition, you will undertake some self-scheduled teaching and learning activities, designed by and/or involving staff, which give some flexibility for you to choose when to complete them. You will also be expected to undertake guided independent study. Information about module study hours including contact hours and the amount of independent study which a

student is normally expected to undertake for a module is indicated in the relevant module description.

### **Accreditation details**

This programme is accredited by the Institute of Food Science and Technology (IFST) for the purpose of eligibility to apply for associate level membership.

### **Assessment**

The programme will be assessed through a combination of coursework, set exercises, in-class tests, oral assessments, artefact production, written examinations and a capstone project. Further information is contained in the individual module descriptions.

### **Progression**

#### *Foundation Year*

The University-wide rules relating to 'threshold performance' as follows

- (i) obtain an overall weighted average of 50% over 120 credits taken in Part 0; and
- (ii) obtain a mark of at least 40% in all individual modules.

In order to progress from Part 0 to Part 1 and be eligible for transfer to BSc Food Science, a student must achieve a threshold performance; and

- (iii) achieve a module mark of at least 50% in in Foundation Chemistry 2 (CH0FC2) or Biology 2 (BI0FB2).

#### *Part 1*

To achieve a threshold performance at Part 1, a student will normally be required to:

- (i) Obtain an overall weighted average of 40% over 120 credits taken in Part 1; and
- (ii) Obtain a mark of at least 40% in individual modules amounting to not less than 80 credits taken in Part 1; and
- (iii) Obtain marks of at least 30% in modules amounting to 120 credits. (A Fail in a Pass/Fail module will be treated as not meeting the minimum threshold requirement for progression or classification. Pass/fail modules are excluded from weighted average calculations but must be passed to avoid failure of the Part or degree.)

In order to progress from Part 1 to Part 2, a student must achieve a threshold performance;

The achievement of a threshold performance at Part 1 qualifies a student for a Certificate of Higher Education if they leave the University before completing the subsequent Part.

Students considering transferring to another programme should seek guidance from their designated Support Centre in the first instance.

## *Part 2*

To achieve a threshold performance at Part 2, a student shall normally be required to:

- (i) Obtain a weighted average of 40% over 120 credits taken in Part 2; and
- (ii) Obtain marks of at least 40% in individual modules amounting to at least 80 credits taken in Part 2; and
- (iii) Obtain marks of at least 30% in individual modules amounting to at least 120 credits. (A Fail in a Pass/Fail module will be treated as not meeting the minimum threshold requirement for progression or classification. Pass/fail modules are excluded from weighted average calculations but must be passed to avoid failure of the Part or degree.)

In order to progress from Part 2 to Part 3, a student must achieve a threshold performance;

The achievement of a threshold performance at Part 2 qualifies a student for a Diploma of Higher Education if they leave the University before completing the subsequent Part.

## **Classification**

Bachelors' degrees

The University's honours classification scheme is based on the following:

Mark Interpretation

70% - 100% First class

60% - 69% Upper Second class

50% - 59% Lower Second class

40% - 49% Third class

35% - 39% Below Honours Standard

0% - 34% Fail

The weighting of the Parts/Years in the calculation of the degree classification is:

*Three year programmes:*

Part 2: one-third

Part 3: two-thirds

*Four year programmes, including professional/work placement or study abroad:*

Part 2: one-third

Professional/work placement or Study abroad: not included in the classification

Part 3: two-thirds

Details of the classification method is given in detail in the [Assessment Handbook](#) under:

- Section 17: Awards (Bachelor's), or
- Section 18: Awards (Integrated Master's programmes). Students who do not progress to Part 4 of the Integrated Master's will normally be subject to the method detailed under Section 17: Awards (Bachelor's)

Please note that there may be a specific version of the above for your year of entry.

### **Additional costs of the programme**

During your programme of study you will incur some additional costs. For textbooks and similar learning resources, we recommend that you budget between £50 to £150 a year. Some books may be available second-hand, which will reduce costs. A range of resources to support your curriculum, including textbooks and electronic resources, are available through the library. Reading lists and module specific costs are listed on the individual module descriptions.

Costs are indicative and may vary according to optional modules chosen and are subject to inflation and other price fluctuations. Estimates were calculated in 2026.

Students may consider purchasing a laptop to help support their learning. Information on recommended device specifications can be found on the [DTS Student Hub](#).

**For further information about your Programme please refer to the Programme Handbook and the relevant module descriptions, which are available at <http://www.reading.ac.uk/module/>. The Programme Handbook and the relevant module descriptions do not form part of your Terms and Conditions with the University of Reading.**

BSc Food Science with Foundation for students entering Foundation year in session 2027/28  
18 June 2026

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