



**DELIVERING SECURE
AND SAFE GLOBAL
FOOD SYSTEMS**

MSc
**GLOBAL FOOD SECURITY
(FOOD SAFETY)**



WHY STUDY FOOD SAFETY AT QUEEN'S?

The Institute for Global Food Security at Queen's University Belfast plays a major role in delivering safe, sustainable and authentic food to the world's population, and has become globally recognised for its excellence in research and was ranked number one for research intensity in the UK for agriculture veterinary and food science (Times Higher Education Research Intensity Ranking/REF, 2014).

As population growth accelerates, the pressure on supplies of food and water has become acute, and billions of people depend on food production and processing companies that supply our food to ensure that it is secure and safe.

The Global Food Security (Food Safety) programme delivered by Queen's University Belfast aims to provide students with knowledge of current and emerging food safety issues and an understanding of the methods that can be applied to monitor and regulate food safety to protect both animal and human health. This programme has been designed to specifically meet the needs of those already working in food safety related areas and also those seeking new opportunities in this rapidly growing area within primary food production, the agri-food industry, non-governmental agencies, food testing laboratories, and regulatory control bodies.

This unique online course is delivered by world-leading research active staff within the internationally recognised Institute for Global Food Security (IGFS) based at Queen's University Belfast which was ranked No. 1 in the UK in the area of Agriculture, Veterinary and Food science (Times Higher Education Research Intensity Ranking/REF, 2014).

The programme content covers a broad spectrum of specialist food safety topics including chemical and microbiological food contaminants, animal and human health, food fraud and integrity, traceability, supply chain protection, analytical approaches to food safety monitoring, and global food legislation. Delivered in a modular format, the programme offers learners the opportunity to study this exciting and rapidly changing area at their own pace through a fully online format, on a flexible basis within their chosen environment. Modern online technology and dynamic advanced audio and video tools will be employed to deliver a stimulating and interactive teaching and learning experience. A number of study options are available including at Postgraduate Certificate (PgCert), Postgraduate Diploma (PgDip), and at Masters (MSc) level.

Students on this programme will be ideally positioned to apply new learning and knowledge for immediate impact within their current employment, but also develop the capacity to form leadership roles within the food industry, regulatory and governmental environment or research organisations, helping to ensure that the world's growing population has continuing access to sustainable, safe and secure supplies of high quality food.

MSc GLOBAL FOOD SECURITY (FOOD SAFETY) DISTANCE LEARNING

The Global Food Security (Food Safety) programme is delivered by leading research active staff within the Internationally recognised Institute for Global Food Security (IGFS) based at Queen's University Belfast.

This is a unique postgraduate level course and awards are available at **Certificate, Diploma or Master's** Level.

The programme offers a flexible study pathway to those working in the agri-food industry who wish to develop their skills and knowledge to a postgraduate level.

The course includes the following modules:

- Food Safety and Health
- Food Integrity, Fraud and Traceability
- Advanced Analytical Tools for Food Safety
- Global Food Standards and Legislation
- Dissertation

See pages 6–8 for more detailed module content.

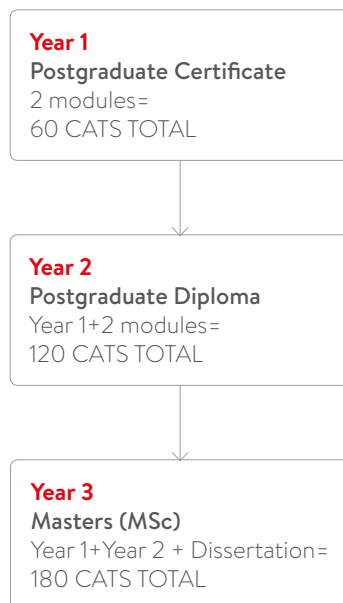
Modern online technology and dynamic advanced audio and video tools will be employed to achieve a stimulating interactive teaching and learning experience across all topics.

This programme offers learners the opportunity to study this exciting and rapidly changing area, taught by world experts within the field, at their own pace (60 CATS per year) and within their chosen environment.

DETAILED MODULE INFORMATION

Students can study the Masters part-time over a period of 3 years, the Postgraduate Diploma part-time over a period of 2 years and the Postgraduate Certificate part-time over a period of 1 year.

Students have the option to enroll initially for a 1 year Postgraduate Certificate and upon successful completion advance to the Postgraduate Diploma and /or Masters programme.



MODULE INFORMATION

FOOD SAFETY AND HEALTH 30 CATS

The Food Safety and Health module provides a solid background in various aspects of food safety evidencing links to health and disease.

Key thematic topics will include: Food safety and health and the consumer; Natural toxins; Environmental chemical contaminants; Man-made chemical contaminants; Microbiological risks.

The module will explore various chemical and microbiological risks associated with animal feed and human food safety, and examine reported links to health defects/ disease progression. The entry route of hazards and contaminants into the agri-food supply chain and the potential health impacts associated with the consumption of contaminated foods will be described. Examination of the acute and chronic effects of exposure to natural (e.g. mycotoxins), environmental (e.g. metals) and man-made toxins (e.g. dioxins) and contaminants (e.g. drug residues) which can occur, persist or bioaccumulate in the food chain will be presented.

Microbiological (e.g. food-borne diseases) and related issues (e.g. antimicrobial resistance) will be examined and the impact on future food security discussed.

Perceptions of what the concept of food safety refers to will be assessed and the impact that this has on consumer behaviour and food risk control measures will also be processed.

FOOD INTEGRITY, FRAUD AND TRACEABILITY 30 CATS

In this module, examples of highly varied, internationally relevant and difficult to detect incidences of food fraud and compromised food traceability will be examined.

The range and types of food fraud will be discussed and the means of detecting such incidences to ensure that food is safe, wholesome and authentic demonstrated. Regulatory requirements and associated challenges to the maintenance of food quality/ safety will be elucidated highlighting the need for sensitive analytical techniques which can assist in such tasks.

The economic consequences of food product recalls due to food contamination incidents will be assessed highlighting the need for traceability across the whole food supply chain, together with an exploration of consumer willingness to pay for improvements to aspects of food safety and traceability.

ADVANCED ANALYTICAL TOOLS FOR FOOD SAFETY 30 CATS

This module examines the principles behind current and emerging monitoring technologies for rapid and early detection of feed/food contamination incidents and disease.

Overviews of applications of various screening and confirmatory test platforms for food security analysis will be delivered. These will include bioanalytical and immunoassay methods incorporating biosensor-based (micro- and nano-technology) techniques, and UPLC and mass spectrometry (QqQ and ICP MS) approaches.

GLOBAL FOOD STANDARDS AND LEGISLATION 30 CATS

The Global Food Standards and Legislation module will introduce international food standard setting, with a focus on the Codex Alimentarius Commission standards processes and will describe its impacts on international trade and World Trade Organisation agreements related to food.

Trends of modernisation of food safety legislation internationally, such as the introduction of the Food Safety Modernization Act in the United States and the changes in China's food safety regulatory system will also be explored.



DISSERTATION

DISSERTATION 60 CATS

This module involves a written dissertation carried out around a hypothesis, case study, critical incident or other significant activity relevant to the programme.

For the dissertation candidates will prepare a project proposal for approval before registering on the module and then develop a full project proposal on which they will be interviewed. Following this they will carry out the project work, keeping a diary and submitting interim reports on progress at weeks 10 and 20 with the complete thesis submitted by an agreed deadline.

Submission of the introduction to the dissertation will take place by week 30 with the completed thesis submitted by an agreed deadline.

During the Dissertation Module students will have regular meetings/ contact with assigned Queen's academic supervisors and tutors, and additional online teaching delivery will relate to project management skills, plagiarism, researching and report writing techniques.



STUDYING BY DISTANCE LEARNING COMPLETE AN MSc ONLINE

Each module is available online for a specified 20 week period each academic year. On-line material will be released over a 15 week content delivery period with a further 5 weeks for completion and submission of the final assessment element. Module content will be opened up on a block-by-block basis every 3 weeks and students will work at their own pace through content completing continuous assessment tasks to agreed schedules.

The distance-learning format is particularly suitable if you are in full or part-time employment as you can organise your studies around your work and family commitments. Furthermore, the flexible format permits study breaks between academic years if required. In addition, employers support our distance learning format as staff do not require regular leave to attend on-campus.

Students download their study materials, participate in course discussions, test their learning, watch video presentations and participate in webinars delivered by food security experts via the University's Online distance learning delivery platform.

Estimated student time required to complete each module is between 15–20 hours per week.

Minimum technical requirements for students enrolling on the programme online:

- PC or laptop (of reasonable specification with webcam or camera)
- Good internet connection
- Up to date browser (with standard plugins)
- Headphones/speakers
- Microphone
- PDF reader
- Word processor

ASSESSMENT

A variety of written coursework, case study and online assessment is used. These will include multiple choice questions, essays, reports, short exercises, case studies, activity logs and presentations. There will be no formal examinations.

Coursework and online assessments are completed according to a timetable provided at the beginning of each module.

* for confirmed Module start dates please check our website:

www.qub.ac.uk

APPLICATION INFORMATION

CAREER OPPORTUNITIES

This flexible online programme has been designed specifically for anyone who wants to know more about this subject of increasing global importance, and who is seeking new opportunities or career advancement and progression in food safety related organisations and the wider agri-food industry sector including:

- Food production
- Agri-Food focused companies
- Processing and Retail Sectors
- Regulatory and governmental control agencies
- Research organisations
- Further PhD level study

The programme is open to local, national and international applicants.

ENTRANCE REQUIREMENTS

Entrance requirements are normally a 2.2 Honours degree or above in a relevant area of science or equivalent qualification acceptable to the University. Applicants with non-standard qualifications will be considered on an individual basis, based on the University's Recognition of Prior Learning policy.

Advice regarding the recognition of qualifications and experience can be obtained from the Admissions and Access Service. The University requires evidence that international candidates are competent in the use of the English language.

FEES

Students pay an annual registration fee.

Postgraduate Certificate

1 year / 2 modules: (60 CATS = £3,480)

Postgraduate Diploma

2 years / 4 modules: (120 CATS = £6,960)

Full Masters

3 years / 4 modules + dissertation:
(180 CATS = £10,440)

Registration fees are subject to an annual inflationary increase. Annual fees can be paid in 4 equal instalments via Direct Debit (UK students) or Payment Plan (non-UK students).



SHAPING A BETTER WORLD SINCE 1845

CONTACT US

General Course Enquiries

askmhls@qub.ac.uk

School of Biological Sciences

Queen's University Belfast

Medical Biology Centre

97 Lisburn Road

Belfast

Northern Ireland

BT9 7BL

www.qub.ac.uk/bb

Institute for Global Food Security

www.qub.ac.uk/igfs

Programme co-ordinator: Dr Mark Mooney

T:+44 (0)28 9097 6537

E: mark.mooney@qub.ac.uk

Admissions and Access Service

Lanyon North

Queen's University Belfast

Belfast

Northern Ireland

BT7 1NN

T:+44 (0)28 9097 3838

F:+44 (0)28 9097 5151

E: admissions@qub.ac.uk

www.qub.ac.uk/directorates/sgc/admissions/