Future Food Sustainability

MSc, PgDip, PgCert

Food security and the sustainability of our food supply chains are global major challenges and are clearly highlighted in the United Nations Sustainable Development Goals (SDGs). Climate change, political and social changes around the world and new diet trends are some of the changing forces we are currently experiencing that put more pressure on our food system. How can we transform our food system to make it more resilient and sustainable while at the same time ensuring the supply of safe and nutritious food for everyone? The Future Food Sustainability MSc is the first of its kind in the UK to provide you with a balanced mix of technology, science, strategic foresight and management skills; enabling you to develop a successful career in the food sector and make a real difference in the world. Teaching is shared with our internationally recognised School of Management and industry experts.

Developed through intensive collaboration and consultation with industry, NGOs and government agencies, our graduates are highly valued, both nationally and internationally, in the area of sustainable food production.

We have a great commitment with student excellence, from both UK and from around the world, and every year we will offer bursaries to several outstanding candidates.

Who is it for?

This course is applicable for graduates from around the world, that are passionate about food production and the sustainability of our food system and wish to pursue a career in the food sector, at a technical or strategic level. Due to the multidisciplinary nature of the course, we accept candidates from a wide range of educational and professional backgrounds. Whether you studied food science or agriculture, or you are simply looking for a career change, this course has something to offer for everyone that wants to make a difference in the way our food system currently works. If you are not sure if this course is right for you, get in touch with us and together we can explore all available options.

Our graduates are equipped with the skills to develop and evaluate future scenarios and undertake financial and economic appraisals that can facilitate decision making and risk evaluation in any food-related context.

Course structure

- Eight taught modules (40%),
- Group project (20%),
- Individual research project (40%).

Future career

At Cranfield our graduates are highly sought after by employers and we are ranked second in the UK for graduate employment (DLHE longitudinal survey, 2017). Successful graduates from this course are expected to move swiftly into positions within food businesses, government, NGOs and research companies/ institutes to engage in roles involving research, management, governance, communication and social responsibility.

*(based on those for whom we hold data. Source: DLHE 2017 Collections).

Specific relevant job roles may include: Technical Managers, Sustainability Managers, Technical Development Managers, Product Technologists, Resilience Officers, Supply Chain/ Logistics Analysts, Commodity Analysts, Regulatory Affairs Advisers, and Policy Officers.

Key information

Duration:
MSc: one year full-time, two to three years part-time, PgDip, PgCert: one year full-time, two years part-time.

Start date:
Full-time: October. Part-time: October.

Qualification:
MSc, PgDip, PgCert.

Location:
Cranfield campus.

Entry requirements
A first or second class UK Honours degree in a relevant science or social science-based discipline; or the international equivalent of these UK qualifications. Candidates with appropriate professional experience are also invited to apply.

Overview of taught modules

Example modules

Modules form only part of the course content with the projects and theses making up the balance. Please see the course structure for details.

The list below shows the modules offered in the 2020-2021 academic year, to give you an idea of course content. To keep our courses relevant and up-to-date, modules are subject to change – please see the webpage for the latest information.

Compulsory modules

(all the modules in this list need to be taken as part of this course).

Agricultural Informatics
During this module, you are provided with an overview of advanced technologies, such as real-time field sensing, model data fusion and advanced forecasting and an understanding of the practical applications and tools for developing, managing and analysing 'Big Data' to better deliver food security.

Economic Valuation and Appraisal
This module explains the principles of financial and economic appraisal and you will acquire the knowledge and skills in the application of such appraisals.

Leading Corporate Sustainability
This module outlines the major sustainability challenges and explores the capabilities organisations require and need to respond positively to them.

Plant-based Technologies
This module provides a critical appraisal of the role of the main plant-based technologies which can be used to advance sustainable crop production and food security. This includes a consideration of the importance of crop breeding, seed technology and crop protection with particular emphasis on future needs.

Principles of Sustainability
This module introduces the main concepts of sustainability and explores how different approaches, such as the 'Ecosystems Services' approach, 'Circular Economy' and 'Per Capita Energy Use', can be employed in order to resolve real-world problems and create commercial opportunities.

Soil Systems
During this module, you are able to gain a fundamental understanding of the science of soil systems and how decisions in land management affect the soil functions related to food production.

Strategic Foresight
Throughout this module you will develop an awareness of the range of methods that can be used to identify, analyse and communicate insights about the future, and how these methods could be used by both private and public sector organisations to inform a wide range of policy, risk, strategy and innovation processes.

Water and Sustainable Agrifood Systems
Providing an overview of the water requirements of crop and livestock systems, evaluating the water related impacts and risk in producing locations and exploring innovative management and technology solutions in order to minimise these impacts and risks in food supply chains.

Informed by industry

The Future Food Sustainability MSc is closely aligned with industry to ensure that you are fully prepared for your new career. Many group and individual projects are supported by external organisations giving you direct access and insight into real companies and real working challenges.

Guest lecturers from business and industry regularly contribute to the taught aspect of the course and together with field trips and off site visits make this course relevant to the real world.

Group project

The group project experience is highly valued by both students and prospective employers. It provides you with the opportunity to take responsibility for a consultancy-type project, working within agreed objectives, deadlines and budgets. For part-time students a dissertation usually replaces the group project.

Examples of recent group projects include:

- **Hygiene profiling of a fast food restaurant.**
- **Assessing microbial spoilage risks of high energy snacks.**
- **Sustainable intensification of UK agroforestry.**

Individual project

The individual thesis project, usually in collaboration with an external organisation, gives you the opportunity to develop your research capability, depth of understanding and ability to provide solutions to real industry and institutional challenges in the wider area of future food supply.

In association with

Cranfield School of Management

Accreditation

The MSc of this course is accredited by:

IAgrE

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For further information please visit
www.cranfield.ac.uk/ffs