

Masters Degree in FOOD MICROBIOLOGY

University College Cork

University College Cork is one of Ireland's oldest institutions of higher education and first Irish 5 star University. UCC is also the world's first Green Flag University and the Sunday Times Irish University of the year 2011-12.

Microbiology in UCC can trace its history to 1924 and is now the leading Microbiology academic centre in Ireland (based on publication output). Our first-rate facilities include extensive, well equipped laboratories with state of the art technology platforms.

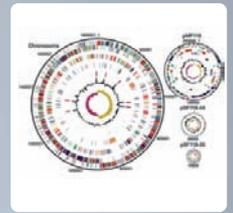
Overview of Programme

The Masters in Food Microbiology is a structured 12 month full-time programme. The aim of this course is to educate students to a masters level in Food Microbiology, emphasising areas in which UCC engages actively in research (e.g. Food biotechnology, Food fermentations, Food safety, Food for Health) and to provide graduates with the knowledge and skills to enable them to contribute to Irish and international food industries.

The programme is suitable for graduates with an honours degree in a cognate discipline with a significant element of laboratory science (e.g. biology, biochemistry, food science, etc.).

Career Opportunities

The Masters in Food Microbiology is designed to equip graduates to work in a range of management and research roles within the Irish and international food industries, including food and beverage industries, product development, quality assurance, contract food testing laboratories, and further studies (e.g. PhD).

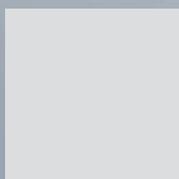


Why food microbiology? Why UCC?

Food is necessary for human survival, is an important source of pleasure, and plays an enormous role in the global economy. Microbes play an essential role in food preservation and safety, food for health and food biotechnology. These are growing areas in all global economies.

UCC Microbiology has established a global reputation in food microbiology, based on its research profile and the impact of its graduates in the food industry. UCC Microbiology covers the breadth of classical and modern food microbiology, including the application of systems biology, the study of the impact of diet on health, the molecular mechanisms of infectious microbes, the role of the gut microbiota in human health, food fermentations and food spoilage, and many more. A detailed list of recent publications from UCC Microbiology can be viewed in the individual staff webpages hosted at www.ucc.ie/en/microbiology/

UCC Microbiology now comprises 18 research active academic staff, incorporating a Professor of Microbiology, a Professor of Food Microbiology, a Professor of Microbial Food Safety and a Professor of Medical Microbiology. Staff at Microbiology UCC deliver on over 60 teaching Modules to over 1,500 students annually. Over 50 research staff are funded directly by research, including Postdoctoral research staff, research assistants and research support staff. These staff are key members of research programmes and are paid from grant income sourced externally by the academic staff members. These staff have a pivotal role in the research activities at UCC Microbiology as well as facilitating research-led teaching at undergraduate and postgraduate levels. In addition, there are over 80 Graduate Students per year registered in the for both PhD and MSc by research.





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Students study the following modules and complete a six-month research project:

The programme consists of the following modules and includes guest lectures, workshops and lab practicals.

STEPS - Scientific Training for Enhanced Postgraduate Studies. This course gives postgraduate students an introduction to principles and practice of scientific research, particularly through focusing on scientific writing and presentation skills.

Library project in Food Microbiology. This assignment aims to teach students how to evaluate the current research and prepare a comprehensive library report in a selected topic of Food Microbiology.

Biotechniques. This course provides a broad overview and hands-on practical experience of a range of techniques applied in cellular and molecular life science research.

Food Biotechnology. This course examines the role of molecular biotechnology in the food industry with reference to methodology; GM foods; molecular methods of identifying foodborne micro-organisms; case studies in food biotechnology.

Microbial Food Safety. This course provides students with a comprehensive overview on the prevalence and nature of organisms which cause foodborne diseases.

Hygienic Production of Food. This course provides a comprehensive insight into the conditions and practices required to produce foods of the highest microbiological quality. The course contains a combination of lectures and workshops dealing with the hygienic production of foods.

Food Fermentation and Mycology. This course provides comprehensive information on the use of micro-organisms in food fermentation, spoilage of foods and animal feeds by fungi and yeasts, and the main mycotoxin producing fungi. Functional Foods for Health. The aim of this course is to provide an insight into the role of functional foods in promoting good health in humans.

Food Markets and Policy. This course provides students with an understanding of the food business chain, evaluating the salient issues addressed by various stakeholders.

Research Dissertation. Each candidate is required to complete a six-month lab-based research project on a topic in the area of Food Microbiology performed under the supervision of a member of staff. The project aims to enhance laboratory skills and critical abilities of students in identifying, analysing and solving problems in scientific research and to develop their skills in communicating their results.



Programme Structure

The programme consists of (i) lectures, (ii) laboratory work on set experiments and (iii) a dissertation based on individual research and development in a selected field of modern Food Microbiology, under the supervision of a staff member.

Entry and Eligibility

Candidates must have obtained a minimum of second class honours Grade 2 or equivalent in a discipline with a significant element of laboratory science. However, candidates with equivalent academic qualifications may be accepted subject to the approval of the College.

The number of places is limited and selection will be made on the basis of the candidate's performance in his/her primary degree or interview.

Further Information	www.ucc.ie/en/study/postgrad/what/sefs/masters/foodmicro/
Course Coordinator	Professor Gerald Fitzgerald T: +353-21-4902730 E: g.fitzgerald@ucc.ie
Application Procedure	www.pac.ie PAC code (CKR19); www.ucc.ie/en/study/postgrad/how/apply-taught/



Gerald Fitzgerald
Professor of Food Microbiology



Colin Hill
Professor of Food Safety