

MSC MICROBIOME SCIENCE

MB6407	Research Dissertation in Microbiome Science	30
Total Credits		90

Overview

The **MSc in Microbiome Sciences** is a full-time intensive programme running for 12 months from the date of first registration.

Students take modules to the value of 90 credits, comprising of lectures and hands-on-training through an independent research project that can take place in UCC or at another academic institution in Ireland or internationally. Students wishing to undertake the research project outside of UCC will first discuss this proposal with the programme Director. In each instance, this will be considered on case-by-case basis and only following discussion with programme Director. Where students are permitted to undertake the research project outside of UCC, this will only be following approval by the programme Director.

This MSc programme provide students with a formal qualification, the knowledge and skills that are required for careers in academia or industry.

The graduate attributes and skills encompass various areas, such as receiving hands-on training in microbiome science in world-leading laboratories in APC Microbiome Ireland and the School of Microbiology. They will also learn to develop and implement skills in data analysis and manuscript preparation/grant-writing. Furthermore, students will demonstrate motivation and initiative to undertake independent and critical research thinking to develop research projects in the area of microbiome science and present a well-structured thesis.

The MSc Degree is awarded to successful candidates after passing 60 credits of taught modules and completion of a 30 credit independent research dissertation on a novel topic and/or application, in microbiome science.

Programme Requirements

For information about modules, module choice, options and credit weightings, please go to Programme Requirements (p. 1).

Programme Requirements

Code **Title** **Credits**

Students take **90** credits as follows:

Part I

Core Modules

MB6401	Cross-kingdom signalling in Microbe-host interactions	5
MB6402	Ecology of Microbial Communities	5
MB6403	Microbiomes in Health and Disease	5
MB6404	Introduction to computational analysis of microbiome data	5
MB6003	Functional Foods for Health	5
PG6001	STEPS - Scientific Training for Enhanced Postgraduate Studies	5
ML6005	Molecular Techniques in the Life Sciences	5
MB6302	Computational Microbiome Analysis	5
MB6405	Laboratory Skills in Microbiome Science	10
MB6406	Library Project in Microbiome Science	10

Part II

Examinations

Full details and regulations governing Examinations for each programme will be contained in the *Marks and Standards Book* and for each module in the *Book of Modules*.

Programme Learning Outcomes

Programme Learning Outcomes for MSc Microbiome Science (NFQ Level 9, Major Award)

On successful completion of this programme, students should be able to:

- Critically evaluate the role of the microbiome in health, disease and sustainability
- Display an integrated knowledge of the interactions between microbes and their ecosystems, including humans, at a molecular level
- Apply different computational biology tools to the analysis of microbiome data
- Independently evaluate published data and integrate different sources of information to produce coherent hypotheses
- Display skills in presenting science in both written and oral forms
- Complete a body of independent research in an area related to microbiome science and present research findings in a dissertation.