

Food and Nutritional Sciences

Food and Nutritional Sciences (Report to GB 2018)

Programmes Taught by the School	<p><i>Undergraduate Degrees and related programmes:</i> BSc (Hons) Food Science BSc (Hons) Food Science and Technology BSc (Hons) Nutritional Sciences Diploma in Food Studies</p> <p><i>Taught Postgraduate:</i> HDip Food Science & Technology MSc Food Science & Technology MSc (Food Science) Postgraduate Certificate in Dairy Technology and Innovation Postgraduate Diploma in Nutritional Sciences</p> <p><i>Research Degrees:</i> Research MSc PhD</p>
Number of Students in the School by FTE	377
Number of Staff in the School by Headcount	The School has 16 Academic staff; 12 Technical Staff, 4 Administration Staff and 11 Postdoctoral Researchers

Brief Description of School Structure (disciplines/departments/units if applicable):

The School of Food and Nutritional Sciences at UCC has a longstanding national and international reputation for provision of quality education in Nutritional Sciences and in Food Science and Technology. The School staff contributes to its flagship programmes, and *BSc (Nutritional Sciences)* and *BSc (Food Science)*, in addition to its recently introduced *BSc (Food Science and Technology International)* as well as other taught programmes in Food Science and Nutrition, including a newly launched *Postgraduate Certificate in Dairy Technology and Innovation*. Our staff also contributes to other University programmes such as BSc (Food Marketing and Entrepreneurship), BSc (International Development and Food Policy), BSc (Public Health and Health Promotion), BSc (Nursing) amongst others. The School also hosts the Food Industry Training Unit (FITU), which offers a number of part-

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time level 7 qualifications in food-related areas as well as servicing the part-time continuing professional development (CPD) and training needs of people working in, or associated with, the food and related industries.

New Programmes in the Pipeline:

An Outline Programme Proposal for an MSc in Clinical Nutrition and Dietetics with an exit award of Postgraduate Diploma in Clinical Nutrition was approved at Academic Board on 20th September 2017.

New Appointments:

Dr Samantha Cushen has been appointed as a Lecturer in Nutritional Sciences on a fixed-term basis.

Awards & Achievements:

- Louise Daly, PhD in Nutritional Sciences, won both the Nutrition Society Postgraduate review competition and the IrSPEN Oral presentation award (top 3 abstracts chosen for oral presentations)
- Dr Aoife Ryan, lecturer in Nutritional Sciences, and her co-authors published the book *Nourishing Your Body During Pancreatic Cancer Treatment* with 7,000 copies distributed for free to Irish hospitals
- *International Conference on Vitamin D and Health*: To close out the EC-funded Integrated Project on Vitamin D, ODIN, which was led by Professors Mairead Kiely and Kevin Cashman, the Cork Centre for Vitamin D and Nutrition Research hosted an international conference on Vitamin D & Health in Europe on the 5th and 6th September 2017. As well as sessions on vitamin D and health, the conference included an industry-focused workshop on sustainable food-first solutions to the problem of vitamin D deficiency. Professor Pat O'Shea, UCC President, opened the conference to 165 delegates from North America, Canada, Europe and Ireland, including scientists, regulatory agencies, health professionals, media, graduate and undergraduate students.



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- Prof Paul McSweeney, Dr Shane Crowley and Dave Waldron visited Beijing Technical Business University to teach the Joint UCC- Beijing Technology and Business University 1st and 2nd Year Food Science & Technology students and to meet with the staff in March 2018.



- School of Food and Nutritional Sciences lecturer Dr Maurice O'Sullivan graduated with an MA in Teaching and Learning in Higher Education in February 2018.
- Dr Therese Uniacke-Lowe received her Postgraduate Certificate in Teaching and Learning in Higher Education from the President of UCC, Prof Patrick O'Shea in January 2018.
- 3rd Year BSc Food Science students visited Dairygold Nutritionals Campus in Mallow in February 2018 to gain insight into the food industry.



- A joint Food Science and Food Business undergraduate student team represented UCC at the Great Agri-Food Debate held in WIT in February 2018.

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Food Ingredients Research Group:

- Dr. Christiane Schmidmeier was awarded the 1st prize for poster presentation at the DPTC knowledge day (2016) for her work on Predictive Drying and Rehydration Properties of Dairy Powders;
- Dr. Diana Oliveira, was awarded a Marie Skłodowska Curie – Career FIT fellowship (243K) in 2017 to carry out a 3-year project on protein based side-streams valorisation, in collaboration with a dairy ingredient Irish industry;



Marie Skłodowska-Curie Postdoc Fellowship Career-FIT Funding for Dr Diana Oliveira with an Irish industry partner in conjunction with Dairy Processing Technology Centre (DPTC).

- SFI Research Infrastructure Award: Category D (Opportunistic funding) (~77k) to Dr. Seamus O'Mahony, in 2017, to support the acquisition of an advanced analytical instrument;
- Travel grant (€1200) under the BRISK2 programme was awarded to Dr. Diana Oliveira, in 2018, for transnational access and joint research activities in LNEG (Portugal);
- Jacob Guralnick, PhD student, was among the 3 finalists of the IWC 2017 Early Career award at the International Whey Conference in Chicago, US, for his work on structuring whey-protein based nano-spacers for enhancing the solubility of caseins-dominant powders.

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- In 2017, Dr. Kamil Drapala, Dr. Diana Oliveira, Dr. Christiane Schmidmeier and Dr. Essam Hebishy, received their IML certificate for completing the Professional Skills for Research Leaders programme;



Other Highlights:

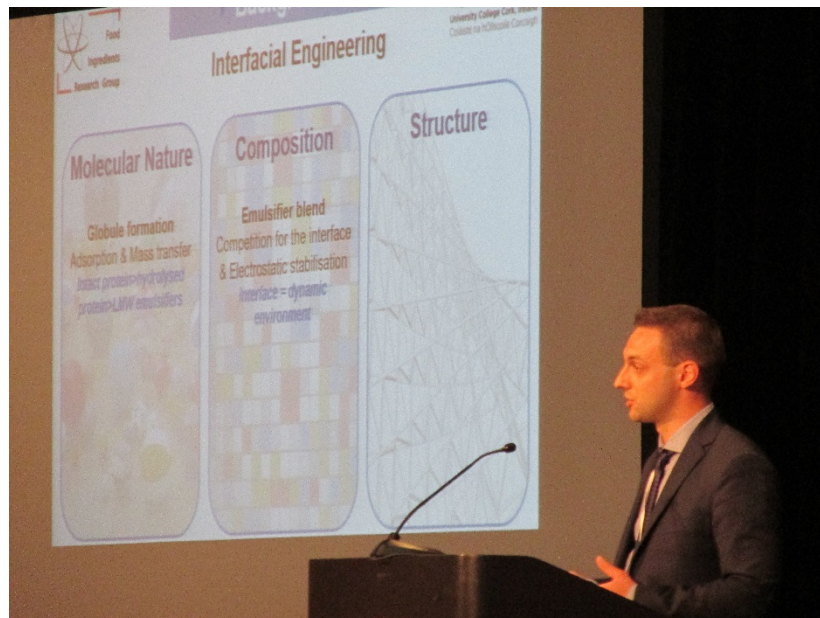
DPTC-UCC workshops organisation

- Dr. Essam Hebishy was the lead organiser of the DPTC Workshop “Understanding, Predicting and Monitoring Heat Stability of Dairy Protein Systems”, at UCC in June 2017 and collaborated on the organisation of several other DPTC-UCC workshops, namely “Heat Stability and Powder Rehydration of Dairy Protein Systems”, in 2016 and “Understanding Fouling of Dairy Protein Systems, Advances in UHT and Innovative Technologies for The Dairy Industry”, in 2018.
- DPTC industry workshop on “Powder Flowability and White Flecking in Fat-Filled Milk Powders”. Developed, organised and delivered by Dr Christiane Schmidmeier (DPTC researcher) and Ryan Hazlett (DPTC postgraduate research student), November 2017, UCC.

- DPTC industry workshop on “Powder Rehydration”. Developed and delivered by Dr Christiane Schmidmeier (DPTC researcher) under the guidance of Dr Seamus O’Mahony, Food Ingredients Research Group, September 2016, UCC.

International conference presentations:

- Dr. Kamil Drapala presented his work in “Interfacial engineering of whey-protein based emulsions to improve physical stability and spray-drying properties”, at the International Whey Conference (2017) in Chicago, US.



Organisation of guest lectures/External Speakers/External Collaborations/Industry partnership

- Dr. Essam Hebishy organised a guest lecture entitled “**Cleaning-in-Place (CIP)**” for the DPTC industry partners given by Water Technology Ltd covering Plant CIP, Membrane Cleaning, CIP Validations and Biofilm, University College Cork, March 2018.
- Dr. Kamil Drapala organised a guest lecture session, bringing Mike Molitor, the pilot plant manager of the Centre for Dairy Research of Wisconsin-Madison University, US, to talk about “Products and Processes option for Acid Whey”. March 2018
- Dr. Kamil Drapala, Dr. Francesca Bot and Dr. Seamus O’Mahony collaborated and presented at the Kerry Group Dairy Science & Technology Initiative at UCC in December 2017 to disseminate the group’s research and opportunities for future collaborations and partnerships.

European Projects collaborations

- PROTEIN2FOOD is a European project designed to create innovative, high quality, protein-rich food crops, to sustain human health, the environment, and biodiversity. Loreto Alonso’s PhD project “Development of plant-based protein-rich food formulations” is supervised by Dr. Seamus O’Mahony as part of this European project. Loreto has presented her work on “Physicochemical and flow properties of plant-based protein-enriched ingredient powders” at the 46th Annual Food Science and Technology Conference, in Dublin (2018).