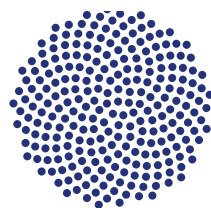




Masters in Sustainable Food Systems (MSc)



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Masters in Sustainable Food Systems (MSc)

(Level 9) Duration: Two Years part-time



BACKGROUND

In Food and Drink manufacturing, sustainability is now a key pillar in their business strategy. For effective implementation, it requires people with expertise in sustainability strategy development, collaboration, reporting, analysis and project management. This MSc programme is designed for those looking to learn the specific knowledge and skills required to develop and deliver sustainability strategies within the food and drink industry.

TARGET PARTICIPANTS

Those in the food and drink industry with full or increased levels of responsibility in sustainability within their businesses. Working in a variety of functions with various 3rd level qualifications, but without a qualification in sustainability.

CORE OBJECTIVES

- Develop a thorough understanding of policies, best practice, sustainable tools and theories that shape the world of sustainable food systems;
- Gain key skills in systems thinking, critical to evaluating complex food systems and developing sustainable solutions to real-world food problems.

EDUCATION PROVIDER

Developed and delivered by Atlantic Technology University (formerly Institute of Technology, Sligo) with direction and support from industry



Ollscoil
Teicneolaíochta
an Atlantaigh

Atlantic
Technological
University

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PROGRAMME PRIORITIES

At the end of this programme, you should be able to:

- Develop a comprehensive understanding of key sustainability principles in food and drink manufacturing, enabling the creation of well-informed and effective sustainability strategies.
- Critically evaluate EU and international sustainability models and frameworks and assess their impact on food and drink businesses.
- Learn how to identify external stakeholders from across your supply chain and the impact they have on your sustainability practices.
- Strengthen your ability to think independently and make evidence-based decisions, while collaborating effectively with both internal and external stakeholders.
- Build competence in identifying, collecting and analysing relevant sustainability data, including an understanding of legal reporting obligations such as the Corporate Sustainability Reporting Directive (CSRD).
- Recognise and develop the soft skills essential for enhancing your effectiveness in sustainability roles, such as project management, communication and presentation skills.

TEACHING AND LEARNING DELIVERY

The programme uses a blend of learning channels to support learning, pre-dominantly live online lectures, supported by face-to-face seminars and self-directed learning. Adobe Connect will be used for lectures, whilst Moodle will be used as the student portal for accessing material, uploading projects and collaborating with staff and other students. Workshops are used to bring learners together and facilitate group learning.

In terms of time commitment, students would need to allow 7 hours per week, consisting of 2 hours evening lectures and 5 hours independent learning and project work.

ASSESSMENT

With a heavy emphasis on practical application, participants are assessed via Continuous Assessment (CA) forms 100% of the marks for each module – no exams. CA will include the following: Scenario Based-Written Assignment, MCQs, Short Assessments, Quizzes, Presentations, Reflective learning journals, Team based assignments, Group project, Case study analysis, individual portfolio of learning.

ENTRY REQUIREMENTS

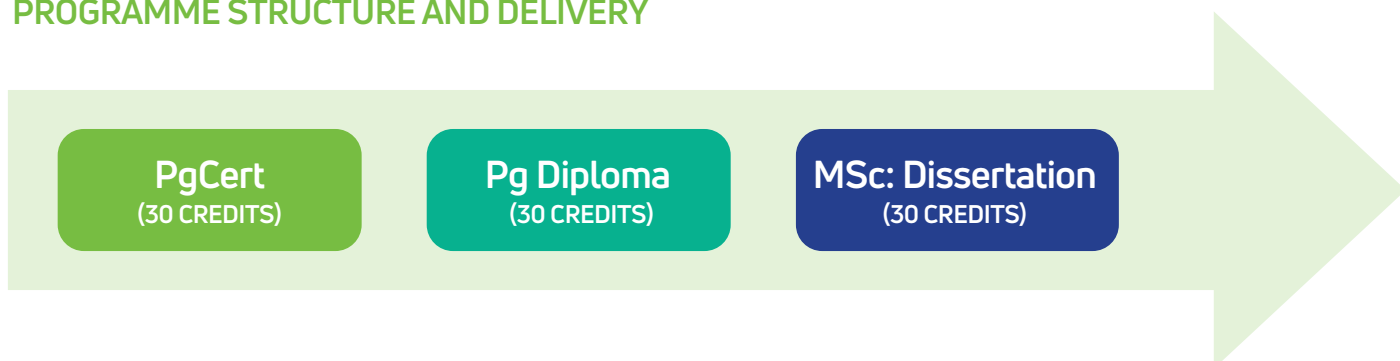
Open to students with a Level 8 Degree or Level 8 or Level 9 in other areas with sufficient work experience as assessed by Atlantic Technological University. Applicants who do not meet this entry criterion may be considered through Recognition of Prior Learning (RPL).



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PROGRAMME STRUCTURE AND DELIVERY



OVERVIEW OF MODULES

CERTIFICATE LEVEL	DIPLOMA LEVEL*	MASTERS
<ul style="list-style-type: none"> • Introduction to Sustainability and Sustainable Food Systems • Systems thinking • Sustainable Production • Sustainability and the Food Chain 	<ul style="list-style-type: none"> • Sustainable Food Systems and Regulatory interactions. • Research methods in Sustainable Food Systems. • Sustainability and International Markets. • Professional Development in Sustainable Food Systems. 	<ul style="list-style-type: none"> • Thesis / Research Project • Company focused • Lit Review • Research • Findings • Recommendations
• 30 credits	• 30 credits	• 30 credits



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CERTIFICATE LEVEL (LEVEL 9, 30 CREDITS)

MODULE OVERVIEW

• Introduction to Sustainability (10 credits)

- Interpret sustainability and sustainable development and what this means in terms of industrial systems and societal needs.
- Explore the role of ecosystems, ecosystems services and natural capital in food manufacturing and understand its significance.
- Investigate the place of Circular Economy and EU Farm to Fork Strategy, and how manufacturers can capitalise on emerging opportunities in sustainable food production.
- Evaluate the impact of key Irish and EU policies on food manufacturing, including the Common Agricultural Policy (CAP), the European Green Deal and Ireland's Food Vision 2030.
- Introduce key methodologies for measuring and reporting sustainability in a changing regulatory world.

• Systems Thinking (5 credits)

- Systems thinking as a tool for understanding the interconnected elements of sustainability in the food and drink sector.
- Overview of key systems ideas related to food production, such as feedback loops, trade-offs and unintended consequences.
- Sustainability and resilience in systems; Socioecological economies, Circular economies, sustainable bioeconomies.

• Sustainable Production (10 credits)

- Resource use including energy, water, material reserves and usage patterns.
- Environmental licensing process for regulating food manufacturing activities.
- A holistic approach to resource efficiency.
- Industry best practice guidance and auditing for the food and drink sector.
- Resource efficiency audits.
- Applying the methods of lifecycle thinking and \ life-cycle assessment (LCA) to the food sector.

• Sustainability across the supply chain (5 credits)

- Sustainable food supply chains.
- The role of traceability on sustainable food production, focusing on standards such as ISO 22005 and Sedex for ethical sourcing and supplier management.
- Ways to reduce or utilise waste generated across the supply chain.
- Food waste v food loss / Food waste valorisation and recovery.
- Food labels and Sustainability
- Consumer perception towards labels and how these affect food choices.



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DIPLOMA LEVEL (LEVEL 9, 30 CREDITS) MODULE OVERVIEW (30 CREDITS)

• Sustainable Food Systems and Regulatory Interactions (10 credits)

- Farm-to-fork strategy and its contribution to EU Green Deal towards production of sustainable food.
- Ways the circular bio-based economy can contribute to sustainable food production.
- Regulation associated with primary production and the achievement of the farm-to-fork strategy towards the production of more sustainable foods.
- Review of the impact of regulations on sustainable packaging.
- Analyse the impact of novel food regulation on the farm-to-form strategy.
- How labelling of food products can contribute to the EU Green deal and contribute to sustainable food choices.

• Research methods in Sustainable Food Systems (5 credits)

- Developing a research proposal in order to answer a research question or test a hypothesis.
- Critically reviewing literature related to sustainability and sustainable food systems.
- Application of research methodology.
- Effective communication of research outcomes.

• Sustainability and International Markets (10 credits)

- Investigate sustainability schemes in international markets and how they compare with the EU single market.
- Evaluate tools to monitor sustainability across international markets, including Carbon Footprinting, ISO standards, Global Reporting Initiative and EU Corporate Sustainability Reporting Directive.
- Green procurement as a lever in sustainable change.
- Evaluate stakeholder assessment tools to evaluate communication needs for their organisation in the contexts of sustainability.
- Appraise the potential risks pertaining to sustainability practices within global markets / trade incl. Greenwashing, False Sustainability claims and Misleading claims.
- Investigate the various international sustainability trends and divergences and how they can impact international trade.

• Professional Development in Sustainable Food Systems (5 credits)

- Critical review of selection of published scientific papers in peer-reviewed journals.
- Devise an appropriate methodology to carry out an industry based Sustainable Food Systems review including the selection of appropriate objectives and targets.
- Devise a strategy to establish, document, implement, maintain, and continually improve on Sustainable Food Systems suitable for a range of different organisations.
- Personal learning, information gaps and proposed plan for continued professional development.



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MASTERS LEVEL (LEVEL 9, 30 CREDITS) OVERVIEW (30 CREDITS)

Description

This requires the learner to pursue research on an appropriate topic in sustainable food systems, develop a research question or test a hypothesis, apply the appropriate research methodology, integrate research findings and articulate the key considerations of the specific investigation. The learner will use knowledge skills and competencies acquired at the Certificate and Diploma stages of the programme.

The learner will be allocated a supervisor who will advise on the direction of the work through regular meetings. Moreover, the student will be given the opportunity to disseminate their findings in oral or written format to their peers. At completion of the module the learners will present the findings of their research project by submitting a thesis and by presenting it in a form of an oral presentation.

Key learnings

- Review scientific literature in relation to Sustainable Food production and manage information from a variety of different sources.
- Understand research methodologies and be able to choose the most appropriate research methodology to answer your research questions.

- Manage a research project with support from an academic supervisor.
- Develops skills to collect, collate, and analyse data using methods like statistical analysis, data visualization and tools to support decision-making.
- Evaluate, synthesise the main findings of the study and develop appropriate recommendations and conclusions to present in presentation, draft report and final dissertation.

Assessment

- **Research project dissertation (70%)**
 - Research project not exceeding 15,000 words (excluding bibliography). Work submitted will be assessed by two members of the lecturing team.
- **Oral Presentation (20%)**
 - Students will prepare a presentation to present their work and partake in a viva voce and discuss and answer questions from a two-member panel.
- **Continuous assessment (10%)**
 - Submission of project plan, draft literature review, draft report and general preparedness during meetings with project supervisor. These meetings will facilitate students in receiving feedback on progress and help feedforward to the higher stakes assessment which is the final dissertation (10%).

PROGRAMME COSTS:

	Food Drink Ireland Skillnet Member Rate	Food Drink Ireland Skillnet Non-member Rate
PG Certificate	€2,900	€4,500
PG Diploma	€2,900	€4,500
MSc	€2,150	€3,000
Total	€7,900	€12,000

Participants have the option to claim their Certificate or alternatively progress to Diploma on pathway to MSc in Food Regulatory Affairs.

MORE INFORMATION

For more information, or to book your place, please contact Mark Skinner on:
(01) 6051615 or mark.skinner@ibec.ie

TIMING

- Certificate and Diploma Programmes run from September to April.
- Lectures are 1 lunchtime and 1 evening per week
- Final MSc module runs from April to end August
- All participants commence the programme at Pg Certificate. Participants can progress to Pg Diploma and MSc on successful completion of Pg Certificate and subject to sufficient demand from participants.



Food Drink Ireland Skillnet

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Food Drink Ireland is a business sector within Ibec.