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## Sustainable Food Sector Curriculum Co-Crete, EdTech 2021

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Féidearthachtaí as Cuimse  
Infinite Possibilities

# Sustainable Food Sector Curriculum Co-Create

*Co-Creation for Knowledge and Curriculum review*

*EdTech 2021 Dr Julie Dunne*

*Julie.dunne@TUDublin.ie*

**LTTC**

**FSEH**

**T**  
**DUBLIN**  
OLLSCOIL TEICNEOLAÍOCHTA  
BHAILE ÁTHA CLIATH  
TECHNOLOGICAL  
UNIVERSITY DUBLIN

# IMPACT Strategic Synergy Project – Embedding Sustainability in the Curriculum

## SDG 4.7

*By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development*



# Strategic Intent

– Strategic Objectives (2030)  
& Strategic Milestones (2023)

## Priorities

Being a  
Beacon for  
Sustainability

## Objectives (2030)

We will be a leader in informing public debate on sustainability, stimulating awareness and action

We will be recognised for our commitment to real action on sustainability, reducing our carbon footprint and meeting global sustainability standards such as STARS @

A new generation of TU Dublin graduates will be leading the sustainability agenda with passion and purpose

Our research community will be internationally recognised in 5 key research fields

We will be known for the creation of new knowledge and the development of timely & practical solutions that address the SDGs

## Milestones (2023)

A campaign of awareness-building will be in place, supported by an events programme of international thought-leader inputs and research

We will be one of the top Irish universities for sustainability, recognised through the achievement of Green Flag awards for all campus locations

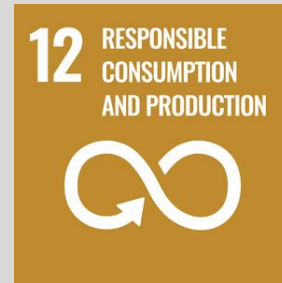
All programmes will have sustainability as a learning outcome and every learner will engage in practice-based research

We will be active participants in relevant global networks; and our research activities will have grown and be concentrated in 5 key fields, delivering a weighted portfolio of research outputs

Creating  
Responsible  
Global Citizens

Tackling Global  
Challenges

# Food – a key role in global sustainability





# School of Food Science and Environmental Health, Environmental Sustainability and Health Institute: Food Research Area



# The current challenge

*Across the entire Food Programme team's expertise in Food Sustainability, there is a deficit in*

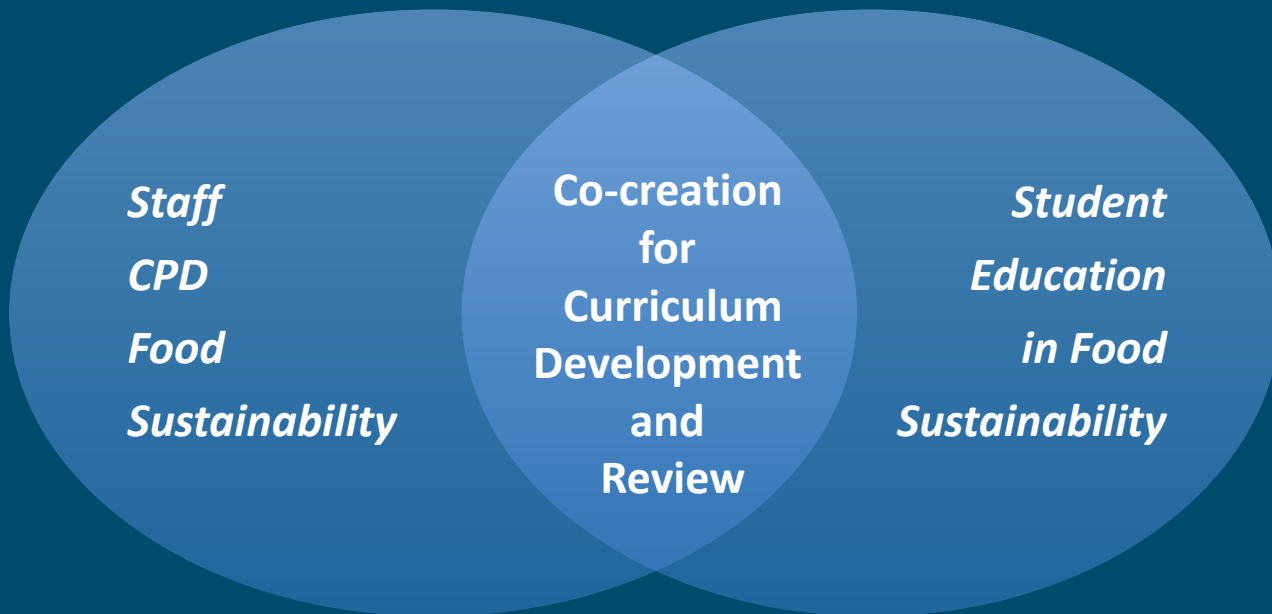
- (1) knowledge of sustainability broadly and as it relates to food*
- (2) how to best integrate sustainability competencies.*

*This is curtailing our ability to review the Food curricula to embed sustainability.*

# Sustainable Food Sector Curriculum CoCreate

*Develop and implement a bespoke staff CPD module in Educating for Food Sustainability with a particular focus on SDGs related to Food as a catalyst for reviewing all Programme and Module Learning Outcomes.*

*Develop and implement a bespoke student optional module aiming to (1) develop their sustainability competency and (2) to allow co-creation for the curriculum review process*





# Co-CREATE

Collaborative Curriculum Reimagining  
and Enhancement Aiming to  
Transform Education



# How will students be included as meaningful partners?

*Develop key basic Sustainability Attributes*

*Involved in curriculum review*

*Students are included as co-creators of the curriculum*

*Graduate skillset as future leaders in Food Sustainability*



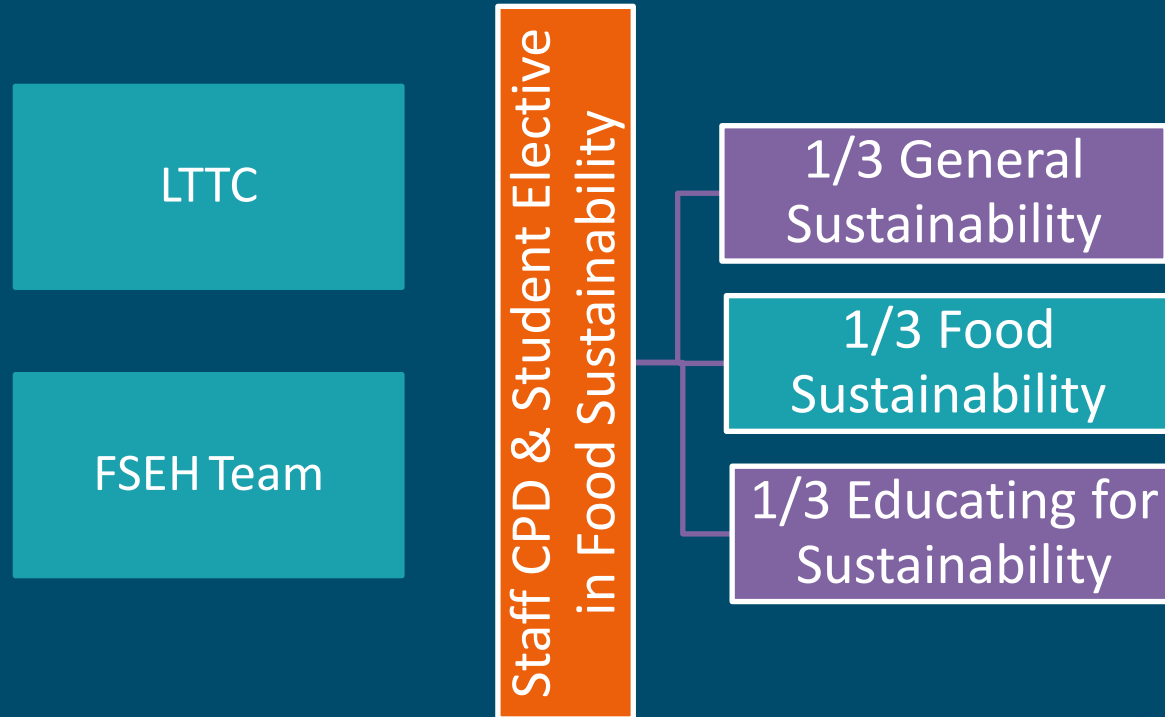
## Co-CREATE

Collaborative Curriculum Reimagining  
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Transform Education

# Sustainable Food Curriculum Co-Create

Phase 1 Oct-Nov 2020 Modules Development & Validation

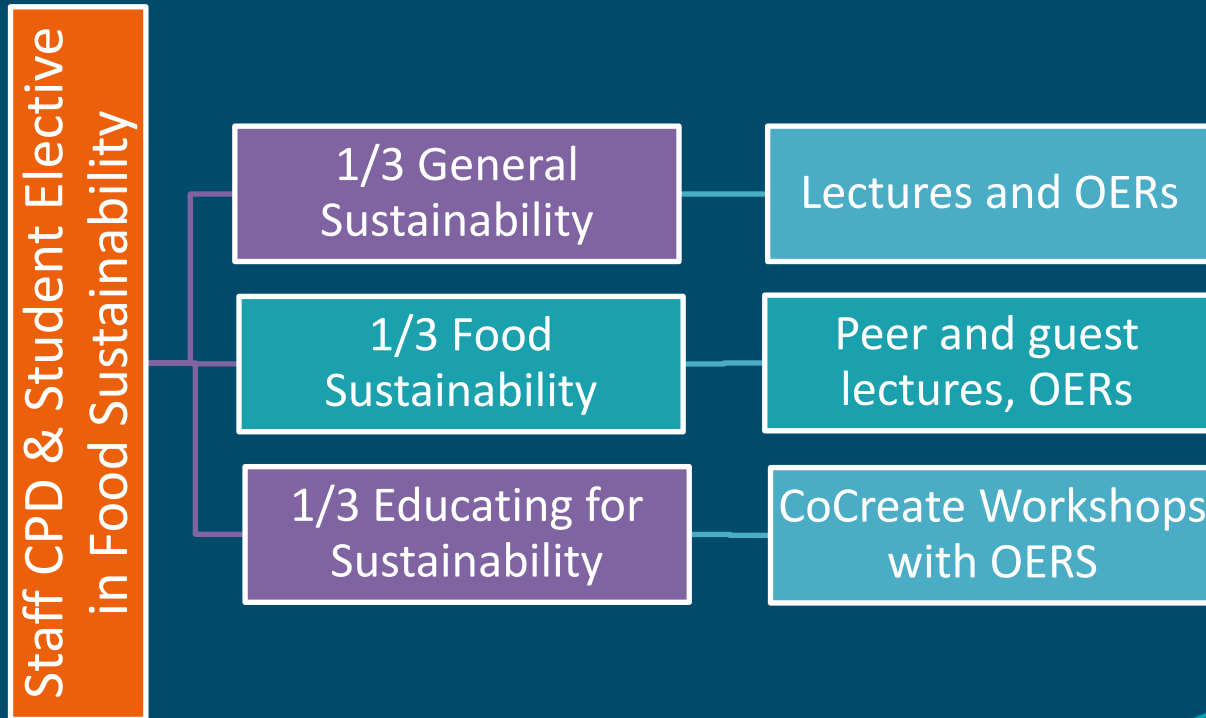
Phase 2 Semester 2 2020/21 Modules Delivery



# Sustainable Food Curriculum Co-Create

Phase 1 Oct-Nov 2020 Modules Development & Validation

Phase 2 Semester 2 2020/21 Modules Delivery





# Sustainable Food Curriculum Co-Create

Phase 1 Oct-Nov 2020 Modules Development & Validation

Phase 2 Semester 2 2020/21 Modules Delivery



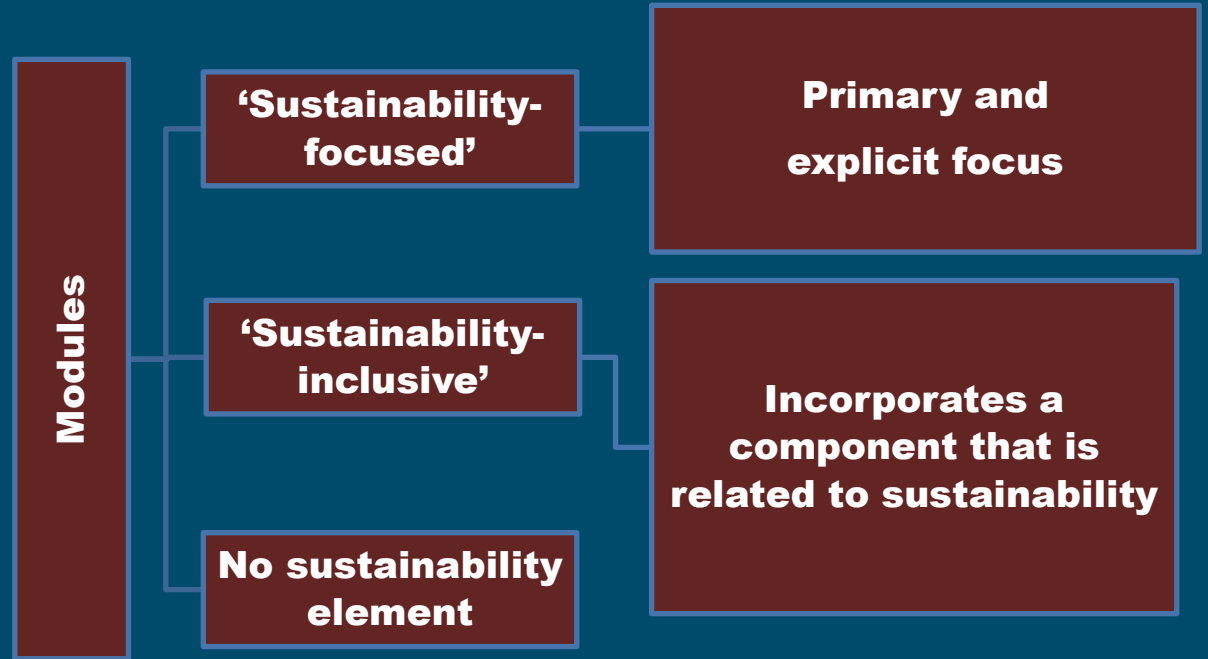


**Co-CREATE**

Collaborative Curriculum Reimagining  
and Enhancement Aiming to  
Transform Education



**stars**<sup>®</sup>  
a program of aashe



# Assessment strategy



Reflection on  
before/after  
Sulitest




Ongoing  
reflection-in-  
action on personal  
development and  
transformation




Food Module  
Descriptor review

# Open Education Resources (OERs)




ARROW@TU Dublin



**IMPACT**  
COMMUNITY - CAPACITY - CULTURE

TOTAL: OPEN EDUCATIONAL RESOURCES



**Sustainable Diets**

Dr Aileen Kennedy RD  
School of Biological & Health Sciences  
TU Dublin

The New Green Deal  
-Making the CAP Fit  
*The Politics of Sustainability*

Fintan Moran

[Arrow@TU Dublin - the research repository of Technological University Dublin](#)

# Open Education Resources (OERs)

<b>Learning Outcomes (LO):</b> (to be numbered)	
For a 5ECTS module a range of 4-10 LOs is recommended	
On Completion of this module, the learner will be able to	
1	Describe the basic terminology of chemical analysis and explain the decision process for choice of methods, and use of validated methods.
2	Describe the principles of sampling
3	Explain the uses of traditional sample preparation techniques <u>as well as potential for greener solvents for extraction of bioactives.</u>
4	Describe aspects of laboratory Quality documentation for analytical methods
5	Describe applications of chemical techniques in food analysis, <u>and the role of green chemistry in analytical methods.</u>
6	Describe applications of instrumental techniques including rapid methods in food analysis
7	Discuss <u>global challenges food fraud</u> in the context of food chemistry and analysis: <u>food fraud and the impact of climate change on food chemical contaminants.</u>
8	Develop enhanced numeracy through in-class and in-practical calculations, including identification and reduction of variance.
9	Develop enhanced laboratory skills to perform high quality food analyses for a range of food constituents
10	Develop enhanced research and scientific writing skills to report on food analysis experiments

# Open Education Resources (OERs)

## M1: Module Descriptor Template

Module Code	Pre-requisite Module codes	Co-Requisite Modules code(s)	ISCED Code	Subject Code	ECTS Credits	NFQ Level (CPD)#
TBC	NA	NA			5	9
<b>Module Title</b>	Educating for Food Sustainability					

*This Header should be repeated on each page of the Module*

**School Responsible:** Food Science and Environmental Health

**TÁ LEAGAN GAELIGE DEN FHOIRM SEO AR FÁIL / AN IRISH LANGUAGE VERSION OF THIS FORM IS AVAILABLE**



### Module Overview:

In response to SDG 4.7, which requires learners acquire knowledge and skills for sustainability, this module addresses a gap identified by the National Strategy on Education for Sustainable Development in the 'preparedness of lecturers to facilitate the type of participatory learning' associated with balancing social and economic well-being with Earth's ability to replenish its natural resources.

For food-sector educators committed to embedding sustainability in their academic practice, this module aims to develop a community of practice, comprising faculty, students, industry and community that can support authentic and transformative living-lab experiences for a sustainable future of our food systems.

Deploying inquiry-based, evidence-based and action-learning approaches, this module focuses on addressing future-of-food issues within a holistic framework informed by the 4 Cs of culture, campus, curriculum and community as a means for transforming food-sector higher education.



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**IMPACT**  
COMMUNITY-CAPACITY-CULTURE

TOTAL: OPEN EDUCATIONAL RESOURCES

# Next steps..

## IMPACT 'Sustainable Sector Curriculum CoCreate

Sustainability Food Co-Create Curriculum

LTTC

TU Dublin Food

Business & Enterprise

Tourism, Leisure, Hospitality, Event

(Bio)Pharma and Life Sciences

Social Enterprise

Convene Sectors

Pharma

Tourism

ICT/FinTech

Social Enterprise

Creative & Cultural

Food & Drink

MedTech



# Sustainable Food Sector Curriculum CoCreate



## Collaborators

### School of Food Science and Environmental Health

Dr. Julie Dunne, Ass. Head of School

Dr. Graham O'Neill, Lecturer in Food Science and Bioeconomy expert

Dr. Catherine Barry-Ryan, Programme Chair BSc Food Innovation and researcher in Food waste valorisation

Mr. Fintan Moran, Programme Chair MSc Food Safety Masters and food legislation expert



### School of Biological Sciences

Dr Aileen Kennedy, Lecturer in Nutrition and Dietetics

### LTTC

Dr. Cormac McMahan, Expert in sustainability and education