

Introducing and Enabling Creativity and Innovation in Undergraduate Modules in Sustainability

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University College Dublin
An Coláiste Ollscoile, Baile Átha Cliath



Concerning sustainable and environmental issues, the majority of students are:

- Concerned
- Motivated
- Action-positive

Issues concerning access to sustainability-themed undergraduate modules :

- Until sustainability is a core component of every degree programme, sustainability modules are competing for selection against other “core” modules.
- Maybe unable to find within the curriculum a module that enables positive-action and creativity in sustainability, is project-based and which has academic recognition.
- Overwhelmed by the challenge of the climate crisis to the extent that they are anxious, depressed and apathetic.

Characteristics of Sustainability



- The UN SDG's illustrate the broad spectrum and interconnectivity of sustainability. It is a complex subject
- Sustainability requires solutions developed collectively by experts in different fields and range of skills
- Communications and marketing skills are essential to counter “fake news” and misinformation by climate deniers/delayers advocates.
- Sustainability operates at a personal, community, national and global level
- Sustainability requires group efforts
- Sustainability is a life-style adjustment and experience that necessitates support at a societal, psychological, economic and financial level
- Sustainability is a life-long learning process
- Sustainability must have Buy-in by the students for it to be adopted

Sustainability Module Objectives



- Informative: Cover SDGs
- Supportive: Students can discuss their concerns in class
- Develop a student's soft skills: Leadership, communication etc
- Empowering; Can-do attitude
- Have a positive ethos : We can achieve the SDG objectives
- Enjoyable
- Facilitate creativity: Lean start-up approach (Eric Ries)
- Risk-taking: How to identify risks and manage them (Social media)
- Encourage formation of working groups with dis-similar backgrounds

Example 1: A Voluntary course outside the curriculum





<https://carbonliteracy.com/>

The Carbon Literacy Trust, Manchester



Carbon Literacy®: “An awareness of the carbon costs and impacts of everyday activities, and the ability and motivation to reduce emissions, on an individual, community and organisational basis.”

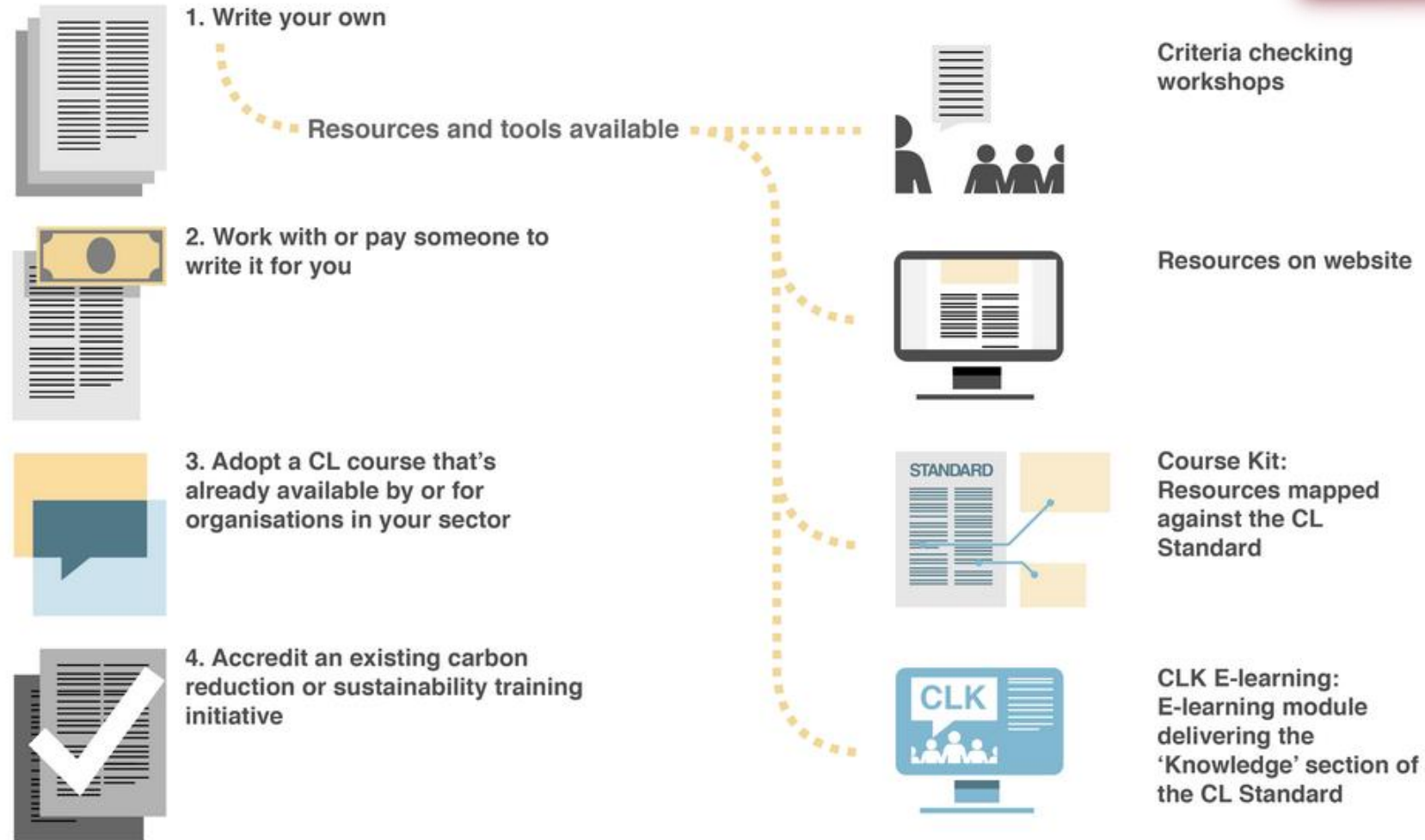
Individual

- Attends an 8-Hour Carbon Literacy Course delivered by an accredited organisation
- Assessment: Submit two essays based on the course material
 - Personal approach to reducing my carbon footprint: Actions and quantification
 - How I can make my organisation more carbon neutral: Actions and quantification
- Certification

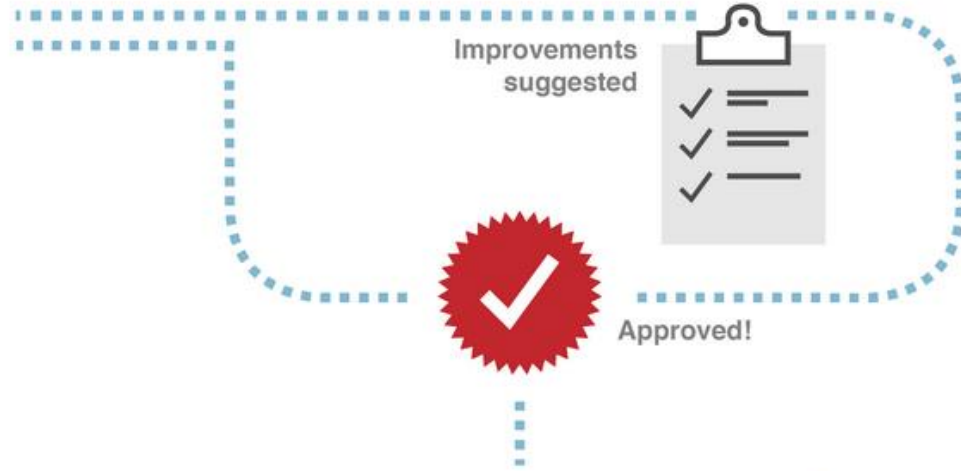
Producing a CLC for Your Organisation



Beginning to design your course Your options:



Submit the course for criteria checking



Optional



You or colleagues may wish to go on a Train-the-Trainer course to improve skills for delivery of CL.

Once approved, you can begin rolling out Carbon Literacy to your people! ←

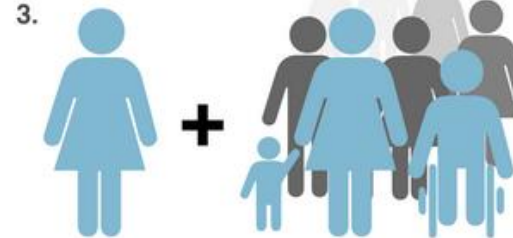
After each course, to certify your people you must submit:



Certificate request form (one per course)



Participant details form (for each participant)



Evidence of individual and group actions

Design of a Carbon Literacy Course for the School of Computer Science UCD and proposal for a Carbon-Neutral School



- 10 X 1st year Volunteer students. **CLC was taken outside the normal degree program**
- 1 group project
- Students did an 8-Hour “off-the-shelf” course from the Carbon Literacy Project (1 to 2 hours week)
- Submitted assessment essays
- Students reviewed sustainable, computing-relevant material from respective and authoritative sources, covering articles, videos etc and suggested how it could supplement the “off-the-shelf” course to **produce a customised Computer Science Carbon Literacy module.**

Student Proposals for the CLC and a Carbon-Neutral School (Work in Progress)



General Irish Overview (To be introduced into new CLC module)

- An overview of the Irish government's climate policy
- Irish carbon emissions by sector
- Climate action groups in Ireland
- Impacts of computing e.g. Laptop, Internet, Cloud carbon footprint
- Circular economy

Carbon management in the School of Computer Science.

- School Sustainability Strategy plan
 - Inventory of I.T equipment
 - Energy management (Monitor, Measure, Reduce) of I.T. Scope 1,2,3
 - Scope 3 emissions due to student flights
 - Propose how the circular economy can be applied to the school
 - Public education: Posters (electronic), Talks
 - Student Sustainability Club, In-term events
 - School Sustainability Committee: Staff and student Science
 - Carbon offsetting
-
- Accreditation, Release and delivery of School of Computer CLC

Example 2: A Project-based Sustainability Undergraduate Module



Enviro-Tech Bootcamp; 3rd Year Module



Module Structure and Objectives

Structure

- Lectures on Sustainability
- Group projects (Typically 3-5 per group)
- Project criteria
 - Project must have a sustainability theme
 - Contain some element of I.T (Website, app, social media)
- No exams

Objectives

- Students learn the principles and basics of sustainability
- Students develop their soft-skills
- Provide an environment for creativity

Evolution of an Idea



1. Three Arts students Victoria, Sadhbh, Meg: Studying English Literature
2. Some social media background experience, wanted do a project on Pre-loved fashion
3. Class organised a UCD Sustainability Open-day and did an individual group project
4. Victoria, Sadhbh, Meg Project: Sustainable Fashion website: Glas (green)
5. Appeared on RTE and several magazines
6. Graduated and went to London, Spain and Australia
7. **18 months later**.....

Utopia-The-Edit Magazine: Content

- **Sustainability:** Climate, Technology, Biodiversity, SDGs, Legislation etc
- **Fashion and Lifestyle:** Fashion, Health and Beauty, Food, Wine etc
- **Art and Culture:** Music, Bands, Events, Journalism courses
- **Profiles/Interviews** of companies, entrepreneurs, products, services
- **Monthly section:** Sustainable Fashion, View from the Vineyard (Climatic impacts and Wine of the month)
- **Social media posts:** Instagram, TiKTok
- **4 Editors**
- **30 Contributors**(writers) around the world
- **Publication syndication** with EARTHDAY.org, <https://climatejournal.news/>, <https://climatejournal.news/profit-with-purpose-magazine>
- **Events/Competitions:** Coldplay Tickets to their carbon-neutral concert in Dublin
Sponsor students on sustainable-travel to a conference + daily blog *
Animated Street Art*

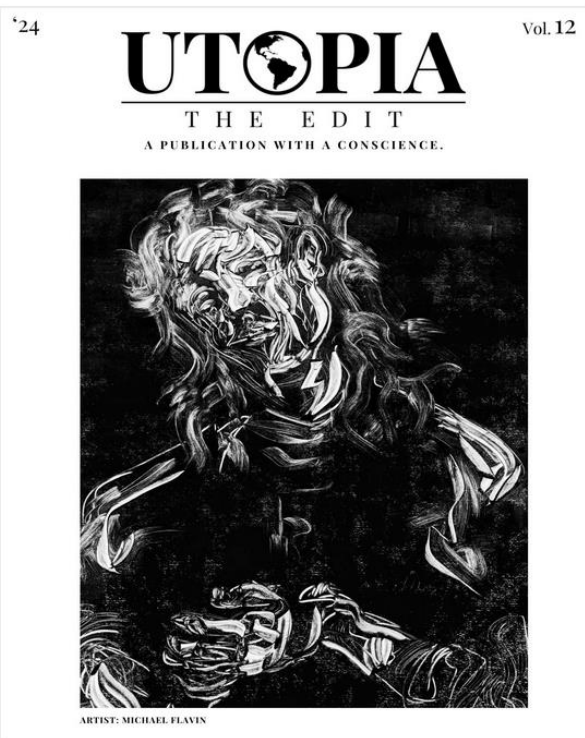


Business Model



- Any business or company can give their profile in the Market section for FREE. This is an area on the site where anyone can search for sustainable products or services.

- Revenue
 - Paid advertisements in the magazine
 - Social media campaigns for companies
 - Events



SUSTAINABILITY



World Biodiversity Day 22nd May: 5 Reasons We Need Trees for a Healthy Planet

Since the start of human civilization, we've cleared 46% of trees globally. And today, with our...

 GUEST AUTHOR

 MAY 21, 2024



World Bee Day 20th May: Bee the Change the World Needs

Every year, World Bee Day is celebrated on May 20 to shed light on the importance of...

 GIOVANNA BARAJAS,
EARTHDAY.ORG

 MAY 19,
2024



In Conversation: Irish Doctors For The Environment For The Environment

'Irish Doctors For The Environment' (IDE) is a charity and NGO consisting of Irish medical...

 CAOIMHE MAHON

 MAY 18, 2024

NEWS & DEVELOPMENTS



Coldplay Beats Emissions Target Set for World Tour June 4

Coldplay reduce their world tour carbon footprint by 59% compared to previous tours through innovative solutions such as dancefloors that allow dancing fans to generate electricity, recyclable LED wristbands and the band travelling by train.

FASHION & LIFESTYLE



View from The Vineyard: April

Terroir, the Human Link Shane Golden,
Manager of Whelehans Wines “The depths in
particular, who...”

 SHANE GOLDEN

 APR 30, 2024



Consumer Culture: The Strategic Consumer

This feature is the first in a series of articles
written by UTOPIA The Edit's new
contributor...

 AOIFE ROONEY

 APR 21, 2024



Era Of The Influencer: Spice Vintage

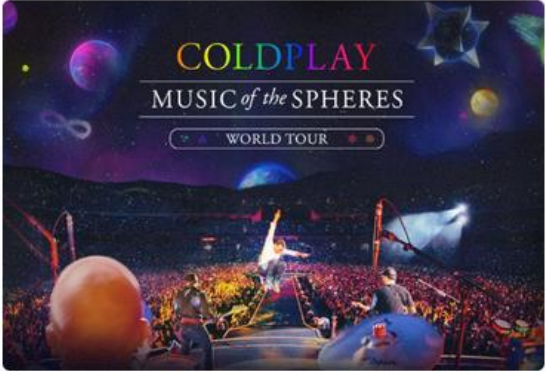
If there was ever a page to get you excited
about all things vintage then it would have to
be...

 CAOIMHE MAHON

 APR 17, 2024



ART & CULTURE



Sustainability Goes On Tour

Imagine being at university and deciding, with a few of your friends, to start a band. Now...

CAOIMHE MAHON

APR 6, 2024



Queerphobia & Fatphobia: The Reality for Artists in the Music Industry's Queer Space

Troye Sivan's new single 'Rush' has become one of my favorite summer anthems with its upbeat...

CAOIMHE MAHON

SEP 22, 2023

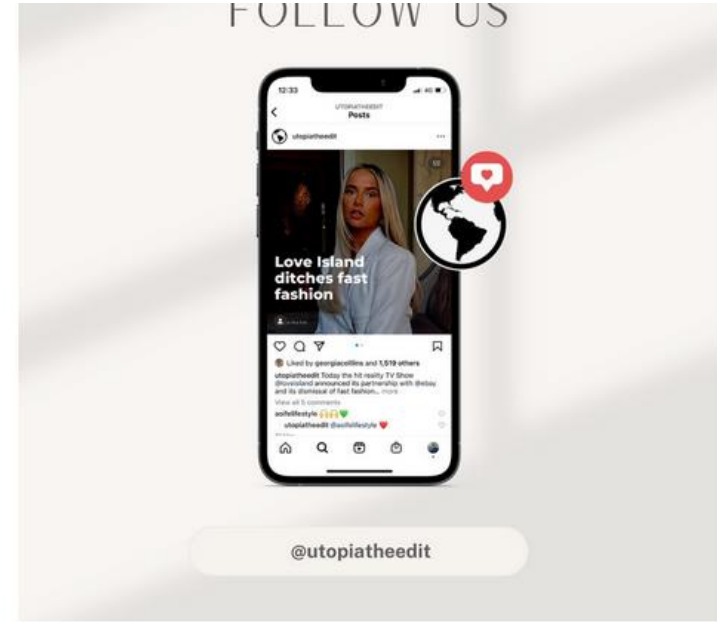


Opinion – Speak Now (Taylor's Version) Is The Album We Needed In 2023

The third edition of Taylor Swift's re-records enters her discography in a similar dramatic...

EVA O' BEIRNE

AUG 1, 2023



UPCOMING EVENTS

18 Jun


Powering The Future: Sustainability, Renewable Energies and Innovation

VENUE TSI Building Maynooth




Burren Smokehouse Ltd

Give the gift of delicious goodness

 Call now

 Website

 Send an email

Profile

Reviews 0





**Utopia-The-Edit.ie
(magazine)**



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(Market Section)**