



2021

University College Dublin
**SUSTAINABILITY
REPORT**









UCD, as Ireland's largest university, is playing a pivotal role in our national response to the challenges of sustainability.





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PREFACE

Sustainability is one of the greatest issues facing the world today. UCD, as Ireland's largest and most globally engaged university, plays a pivotal role in the national response to the challenges of sustainability and is seen as a leader in both the European and global higher education contexts. Our University continues to engage with and strengthen our commitment to the 2030 Sustainable Development Goals and to accelerate our contribution to their achievement. I am delighted to introduce the UCD Sustainability Report 2021, which sets out many of the key activities, initiatives and outcomes which the University has undertaken over the past two years.

Since early 2020, the COVID-19 pandemic has had significant impact, emphasising the global nature of modern societies, the deep interconnection of human experiences and our need to face challenges together. In this regard, I am particularly proud of UCD's response to the pandemic. Our faculty, staff, alumni and students made an enormous and leading contribution to the national response. Equally importantly, UCD faculty and alumni have played significant roles in international responses to the pandemic through, for example, the public health initiatives of the World Health Organisation thus strengthening UCD's international impact in response to Good Health and Wellbeing (SDG 3).

In other areas, initiatives have been undertaken to address Gender Equality (SDG 5) through the University's Equality, Diversity and Inclusion Strategy and to Reduce Inequality (SDG 10) through initiatives serving underrepresented groups and communities locally and internationally. We also have extensive research activities addressing Food and Nutrition (SDG 2), Clean Water (SDG 6), Clean and Sustainable Energy Development (SDG 7), Sustainable Cities and Communities (SDG 11) and Climate Action (SDG 13).

With respect to education, highlights of UCD's contribution include the launch of new educational programmes in sustainability at both graduate and undergraduate level. The new interdisciplinary BSc in Sustainability enrolled its first students in September 2020 and is already proving popular both domestically and internationally. The new MSc Sustainable Development is offered online to both part-time and full-time students and has attracted similarly high demand.

To further build on our commitment in terms of sustainability and achievement of the Sustainable Development Goals, UCD has foregrounded four key themes as part of our Strategy 2020-2024, Rising to the Future: 'Creating a Sustainable Global Society', 'Transforming through Digital Technology', 'Building a Healthy World' and 'Empowering Humanity', all of which significantly contribute to the overarching objective of sustainability across the University. Each of these themes will significantly help to inspire, inform and progress UCD's initiatives.

This report captures some of the highlights of the past two years and I hope you will find it informative, rewarding and inspiring.

Professor Mark Rogers
Acting President
University College Dublin

INTRODUCTION



University College Dublin is Ireland's largest and most globally engaged university and one of Europe's leading research-intensive higher education institutions.

Through our research, education and our global and community engagement, UCD continues to make a major contribution to Irish science and society.

Similarly, our European and Global impact continues to grow significantly.

UCD's Sustainable Development Goals (SDG) initiatives seek to build on our well-established contributions to human development and to link activities across research, education, engagement and governance. UCD has a strong affiliation with the development of the SDGs, UCD Alumnus and Irish Permanent Representative to the UN, Dr David Donoghue, co-facilitated the intergovernmental negotiations that led to the Goals while Prof Patrick Paul Walsh of UCD successfully argued for the inclusion of science and academia in delivering on the Goals.

UCD is a member of the UN Sustainable Development Solutions Network (SDSN) and SDSN Youth, which operates under the auspices of the UN Secretary General to mobilise global scientific and technological expertise to promote practical solutions for the implementation of the Goals at local, national and international scale. It also contributes to global sustainability initiatives through its membership of UN Academic Impact.

In 2020, UCD published its first sustainability report, documenting our ambitious agenda to progress actions and build on existing initiatives in sustainability. Our initiatives bring together employees, students, alumni, and a wide range of partners, guided by UCD's University Management Team (UMT). This year's report builds on that strong platform and highlights our recent activities to progress our sustainability agenda.

The sections below set out UCD's progress in the areas of governance, education, research and impact, and partnership and engagement. Of particular note, this year's report includes a section on the Covid pandemic and UCD's contribution to addressing its challenges.



SUSTAINABILITY AND UCD'S RESPONSE TO THE COVID PANDEMIC



Covid-19 has hugely challenged all countries across the world, both in terms of the public health challenge but also in terms of managing the social and economic implications of the crisis.

UCD has made a significant contribution to both the national and international response to Covid and some examples of our key activities are set out below.

UCD: SUPPORTING IRISH HEALTH THROUGH COVID

The National Virus Reference Laboratory (NVRL) at UCD was at the heart of the national COVID pandemic response from the earliest stages. The NVRL took a leadership role in the development and delivery of our national testing capacity. From the outset, UCD faculty and alumni played pivotal leadership roles in the National Public Health Emergency Team (NPHET); including, Dr Tony Holohan (Chief Medical Officer), Dr Cillian de Gascun (Director NVRL) and Professor Philip Nolan (Chair of NPHET's Irish Epidemiological Modelling Advisory Group).

Contributions include:

- The creation of the UCD Contact Tracing Centre (CTC) in response to a request from the HSE to assist with the national contact tracing programme. The facility, led by Associate Professor Mary Codd and Professor Patrick Wall, operated a roster of over 300 volunteers, many of whom came from schools within the UCD College of Health and Agricultural Sciences, and handled up to 600 calls each day.
- Many of the existing research groups within the UCD School of Medicine refocused their priorities to respond to the pandemic, including the UCD Clinical Research Centre, the UCD Centre for Pathogen Host Research (CEPHR) and the Critical Care Clinical Trials Network under the direction of Professor Alistair Nichol.
- UCD's appointment as National Coordinator of the European Corona Trial Accelerator Platform based on previous work developing and validating new assays used in vaccine trials as part of the VACCCELERATE programme
- Hosting a vaccination centre on its Belfield Campus, in collaboration with the Health Service Executive (HSE), in support of the national vaccination programme.

The UCD Contact Tracing Centre (CTC) was created in response to a request from the HSE to assist with the national contact tracing program.



Tánaiste Leo Varadkar TD, Simon Harris TD, Minister for Further and Higher Education, Science and Research meet with Dr Cillian de Gascun, Director, National Virus Reference Laboratory.



- Professor Paddy Mallon (UCD School of Medicine) co-leads the National Irish COVID Biobank (NICB). The NICB is an essential component of Ireland's response to the COVID ensuring that COVID samples and associated clinical data are collected in a coordinated and harmonised manner, and that researchers can access this material using a mechanism that complies with safety, quality, and other international best practices and standards.
- The UCD Medicine Class of 2020 graduated early, in May 2020, to join the public health workforce. In late spring and early summer, undergraduate nursing and midwifery students supported the national effort when their scheduled practice placements were temporarily suspended, and they were redeployed as frontline care staff. With the resumption of placements in July, the School worked closely with the Nursing and Midwifery Board of Ireland and the health services to ensure that all students progressed through their programme.
- The UCD School of Nursing, Midwifery and Health Systems developed freely accessible online courses for nurses working with critical COVID patients. The courses were developed by Ms Katie Wedgeworth, Dr Rita Smith and Ms Orla Daly and were developed specifically for critical care nurses working in Intensive Care Units (ICUs) and also for registered nurses relocated to assist and support ICU nurses in High Dependency Units (HDUs) and ICUs.





GOVERNANCE AND OPERATIONS

OVERVIEW

The UCD Strategic Plan 2020-2024 'Rising to the Future' foregrounds sustainability as a key component of all that we do at UCD. The President's introduction to the Strategic Plan states:

"Building on the traditions of the past, we are a university of the future, connected and connecting, engaged and engaging, committed to a sustainable future built on a healthy biosphere. We will contribute to a sustainable future through our graduates, through our research and through the way we conduct our business."

The Strategy sets out four themes which permeate everything that we do as an institution, including our governance and operations. UCD has made considerable progress in our policies, procedures and practices over the past two years to embed the aspirations of the UN SDG's.

Some key developments are highlighted below.

HIGHLIGHTS

- UCD successfully applied for Athena Swan Bronze reaccreditation. More than 50% of UCD Schools now also have Athena Swan Bronze awards (SDGs 4&5). UCD is also implementing Gender Equality Action Plans at both institutional and school levels (SDG 5).
- Completed a review of the University's policy management framework to accommodate the rapid decision-making and changes to practices necessitated by COVID (SDG 3). Specific examples include:
 - Standardisation of the University's procedure for developing and amending policy to address future emergencies and exceptional circumstances.
 - The establishment of a standard principle to ensure consistency and compliance in policy development, approval, implementation, and review across the university.
- Deployment of an active energy management policy and approach has successfully underpinned reductions in energy consumption, costs and emissions to achieve our 2020 energy targets (SDGs 7, 11, 12 & 13)
- Investment in renewable biomass boilers (wood pellets) that power the University heating system and solar PV (photovoltaics) to produce renewable electricity. Additionally, UCD has invested significantly in solar thermal panels that produce hot water across the campus (SDGs 7, 11, 12 & 13).
- Undertaking work to identify how the estate can be gradually decarbonised in line with our Climate Action Plan. In the first phase, a 1MW high-temperature heat pump will be installed in the Belfield district heating system which will reduce carbon emissions by up to 800 tonnes per annum (SDGs 7, 11, 12 & 13).
- Installation of an energy monitoring and Building Management System, a smart technology that began as a student project and has grown into an extensive system that remotely monitors and controls heating, lighting, and ventilation systems across the campus (SDGs 7, 11, 12 & 13).
- Progressed the delivery of world-class facilities as part of our 10-year campus development plan, (UCD Strategic Campus Development Plan 2016-2021-2026). The plan will deliver high-quality residential accommodation to meet the needs of a growing student population with a focus on sustainable design.

SPOTLIGHT

EQUALITY, DIVERSITY & INCLUSION (EDI)

UCD is committed to creating an environment where diversity is celebrated. The University has a strong commitment to equality of opportunity for our staff and students and to promoting and maintaining an inclusive work and study environment underpinned by the principles of dignity and respect. Embedding the principles of equality, diversity and inclusion across our university will be crucial to the success of UCD as a leading research-intensive university and to the delivery of our strategic plan.

To this end the UCD Equality, Diversity and Inclusion (EDI) Strategy and Action Plan 2018 -2020 - 2025 sets out six strategic objectives which will underpin all of our university activities. These are to:

- Support the University in its mission and vision to continue to be an equitable, diverse and inclusive community;
- Enhance the student and employee experience at UCD to attract and support those from all backgrounds to excel at study and work, and to become the University of choice for all including those from underrepresented groups;
- Promote a culture of dignity, respect and wellbeing for all, and eliminate all forms of discrimination;
- Develop a framework to capture robust and reliable equality and diversity data for students and employees in order to monitor progress in areas of under-representation;
- Raise awareness amongst the University community by promoting greater understanding and engagement with EDI issues across the University;
- Collaborate with external bodies on EDI related matters with a view to becoming the leading third level Institution in Ireland to advance equality, diversity and inclusion.

UCD has also made significant gains in key areas of the EDI agenda including mental health and wellbeing, race and ethnic equality and developing EDI in the time of Covid. Further details of these initiatives can be found at <https://www.ucd.ie/equality/>



SPOTLIGHT

SUSTAINABLE PROCUREMENT

UCD adopted a Sustainable Procurement Policy in 2021 which supports the procurement of products and services produced and delivered in a socially responsible way. This policy embeds the values of social equity, human health and environmental concern into the daily operational needs of the university community, from teaching and research to laboratory equipment, office purchases and capital projects.

For example, UCD now requires tendered suppliers to incorporate sustainable practices and environmental responsibility into the goods and services they provide. Specific instances include:

- Procurements which support the reduction of GreenHouse Gas emissions;
- The “UCD Wrap It” initiative which is a web-based platform where fit- for-purpose furniture is uploaded for collection by the UCD community as well as charities.



SPOTLIGHT

GREEN CAMPUS INITIATIVE

The Green Campus Initiative provides an opportunity for interested students and staff to get involved in projects and initiatives that can make a real difference and raise the profile of environmental issues across the University.

Students are offered the opportunity through volunteer and student co-ordinator roles to positively influence individual and collective behaviour, meet people with similar interests, learn new skills and earn recognition for this co-curricular work through the UCD Advantage Award and the UCD in the Community Volunteering Awards.

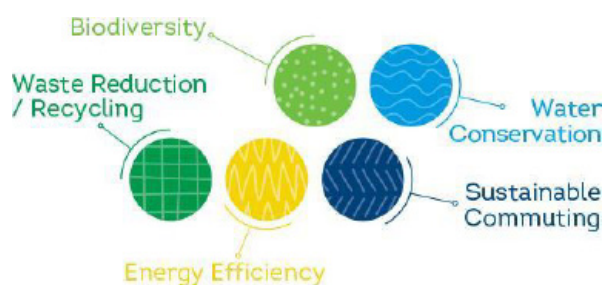
Green Campus Student Coordinators:

In 2021, we invited interested students to get involved by becoming Green Campus Student Coordinators. This part-time role allows students an opportunity to volunteer to work on and co-ordinate student initiatives in the following 5 key areas:

- Energy efficiency
- Water conservation
- Waste reduction and recycling
- Sustainable commuting
- Biodiversity

A Green Campus Newsletter shares information on sustainability initiatives throughout the University with the UCD community. It also provides an alternative platform for members of the community to engage with the Green Campus programme, to provide feedback and to prompt ideas for discussion.

<https://ucdestates.ie/blog/2021/12/16/green-campus-green-your-christmas/>



EDUCATION

OVERVIEW

The UCD Strategic Plan 2020-2024 sets out as a core objective to

“Provide an inclusive educational experience that defines international best practice and prepares our graduates to thrive in present and future societies”

The provision of education has been particularly challenging over the past two years. In response to COVID pandemic and the consequent restrictions, UCD has moved from face-to-face teaching, learning and assessment activities to a blended and distance learning structure, and developed a strong focus on sustainability education.

PROMOTING SUSTAINABILITY IN TEACHING AND LEARNING

UCD has made considerable progress in integrating sustainability into its core curriculum and educational provision through standalone degree programmes at undergraduate and graduate level, but also through encouraging the embedding of the SDGs within the wider curriculum.

UCD aims to ensure that every graduate has a baseline knowledge of sustainability issues and provides specialist interdisciplinary education to develop leaders in sustainability.

HIGHLIGHTS

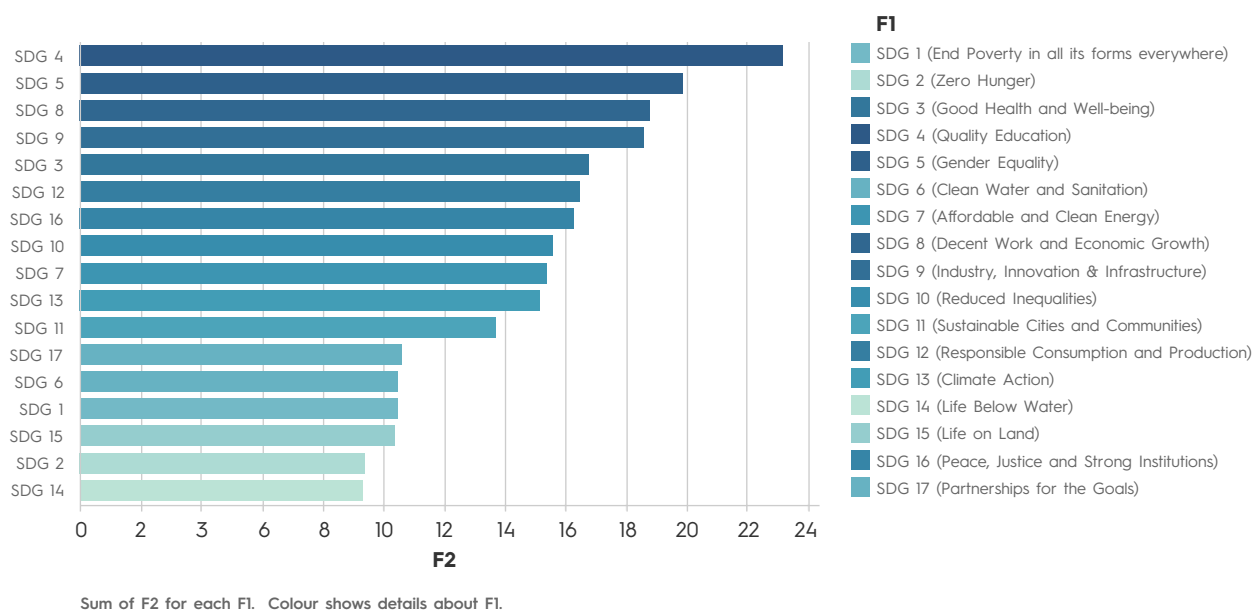
- In 2020, UCD conducted a university-wide quantitative evaluation of degree programmes in relation to the United Nations 17 sustainable goals with the objective of embedding the key elements of the SDGs into our programme content, enabling students to better understand sustainability and apply its principles to their own academic specialities. Key results include:
 - SDG 5 (Gender Equality), SDG 8 (Decent work and Economic Growth) and SDG 9 (Industry Innovation and Infrastructure) were identified as the top SDGs embedded in our undergraduate programmes.
 - SDG 3 (Good health and Well-being), SDG 5 (Gender Equality) and SDG 9 (Industry Innovation and Infrastructure) are more frequently embedded in graduate programmes.
 - For both undergraduate and postgraduate programmes, SDG 15 (Life on Land), SDG 2 (Zero Hunger), and SDG 14 (Life below water) were less covered across the University.



Undergraduate programmes

The graph below summarises quantitatively the frequency of offerings for each of the 17 SDG goals across the University.

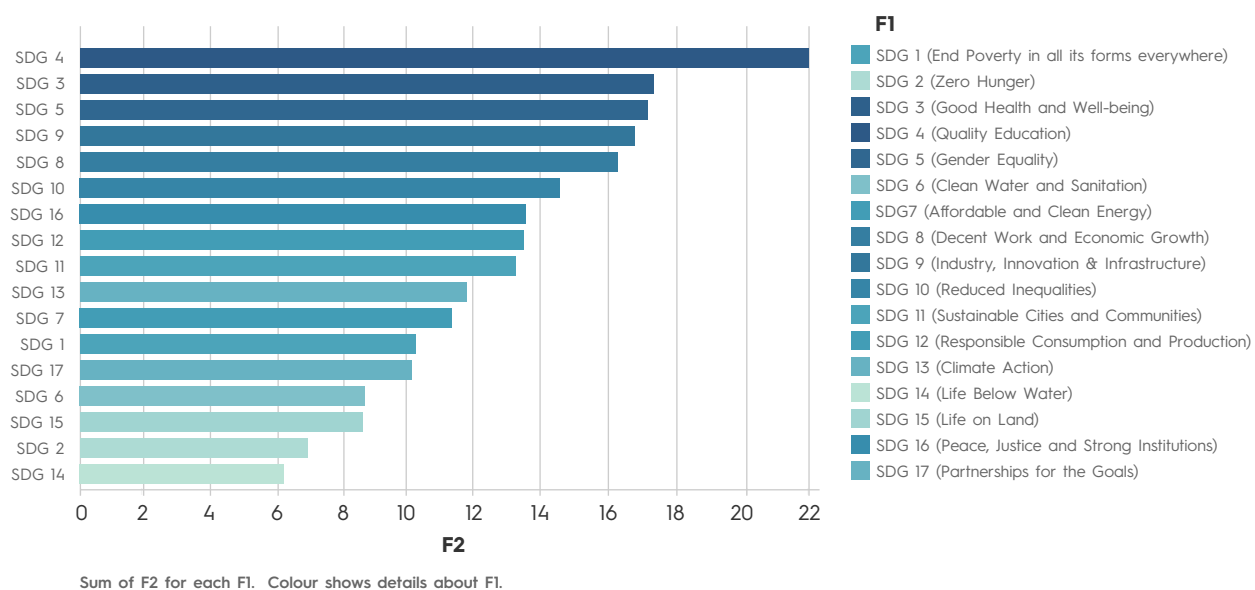
Mean distribution of assessed undergraduate programmes per SDG across the University



Graduate programmes

The graph below summarises quantitatively the frequency of offerings for each of the 17 SDG goals across the university.

Mean distribution of assessed postgraduate programmes per SDG across the University





- UCD has recently launched new undergraduate and graduate programmes in sustainability. The new interdisciplinary BSc in Sustainability, supported through the Human Capital Initiative (HCI), enrolled its first students in September 2020. Students take modules from across the University colleges with opportunities to specialise in environmental sciences or social sciences, policy and law or business and economics. The programme intake has doubled in 12 months and is attracting very high quality and motivated students.
- The MSc Sustainable Development is a new interdisciplinary programme offered part-time or full-time through online provision and is run in partnership with the UN Sustainable Development Solutions Network. The programme is affordable and accessible to those wishing to advance their knowledge and skills in sustainable development.
- In 2021, UCD exceeded its own KPI targets for the proportion of its students drawn from underrepresented groups. With a target of 33%, UCD has achieved a 34.6% outcome.
- The UCD Innovation Academy has introduced modules consistent with SDG 4 (Quality Education) Target 4: *“By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship”*. The Innovation Academy now reaches 1,000 of our students annually and is helping to develop entrepreneurship and innovative workplace skill sets.

SPOTLIGHT

UCD ADVANTAGE SUSTAINABLE DEVELOPMENT GOAL CHALLENGE

In partnership with UCD Green Campus, Healthy UCD, UCDVO and the UCD Innovation Academy, the UCD Careers Network held the first-ever UCD SDG Challenge by challenging student teams to find creative solutions to issues facing the UCD community and then pitch their ideas to judges.

This competition was an excellent opportunity for students to develop their problem-solving, communication and team-working skills while raising awareness of the UN Sustainable Development Goals. The competition included Design Thinking and Pitching Your Idea workshops which supported students in planning their final pitch. The three challenges were linked to UN Sustainable Development Goals:

- **Challenge 1:** How would you ensure the UCD community recycle correctly and prevent waste contamination? (SDG 12; Responsible Consumption & Production)
- **Challenge 2:** How would you encourage healthy eating at UCD? (SDG 3; Good Health & Well-being)
- **Challenge 3:** How can UCDVO harness the benefits of technology to provide the UCD community with opportunities to engage in international volunteering and development education activities? (SDG 10, Reduced Inequalities)

Ten student teams pitched their solutions to our judging panel, and prizes were awarded for first, second and third place. The feedback provided by students following the final event was very positive:

- 91% said they feel more confident about presenting in the future,
- 100% said the competition was enjoyable and fun,
- 100% would recommend the competition to their friends.



SPOTLIGHT

EXPERIENTIAL LEARNING IN ENVIRONMENT AND SUSTAINABILITY

The College of Social Sciences and Law have actively been supporting the achievement of the university strategic objectives through funding educational and research activity. Assoc Prof Ainhoa Gonzalez del Campo (School of Geography) was awarded support to enhance students knowledge and skills on sustainability topics.

The overall aim of the curriculum development project was to support the development of students' research and professional skills through experiential learning. The associated group work was also developed to satisfy the Stage 3 learning outcomes for the College of Social Sciences and Law; in particular, working collaboratively to critically evaluate and reflect on current global societal and environmental challenges and to ideate local solutions, and communicating these to both specialist and non-specialist audiences.

The first step was to divide the contact-time in the module in two parts: the first contact hour continued to be dedicated to lectures (centred around Sustainable Development Goals and environmental sustainability in particular) and the other hour was allocated to workshops, where students were to interact in groups around predefined tasks.

RESEARCH AND IMPACT

OVERVIEW

As a global community, we are facing major challenges and opportunities to create a more healthy, equitable, and sustainable society. UCD researchers work actively to address this global challenge, through excellent research with strategic partners in government, industry, academia, and the community.

'Shaping the Future: UCD Strategy for Research, Impact and Innovation' emphasises excellence and impact in all aspects of our research and innovation, delivering at a scale that allows us to make a difference in areas of national and global significance. The COVID pandemic has, more than ever before, brought to public attention the need for insights and solutions from high-quality research to address societal challenges.

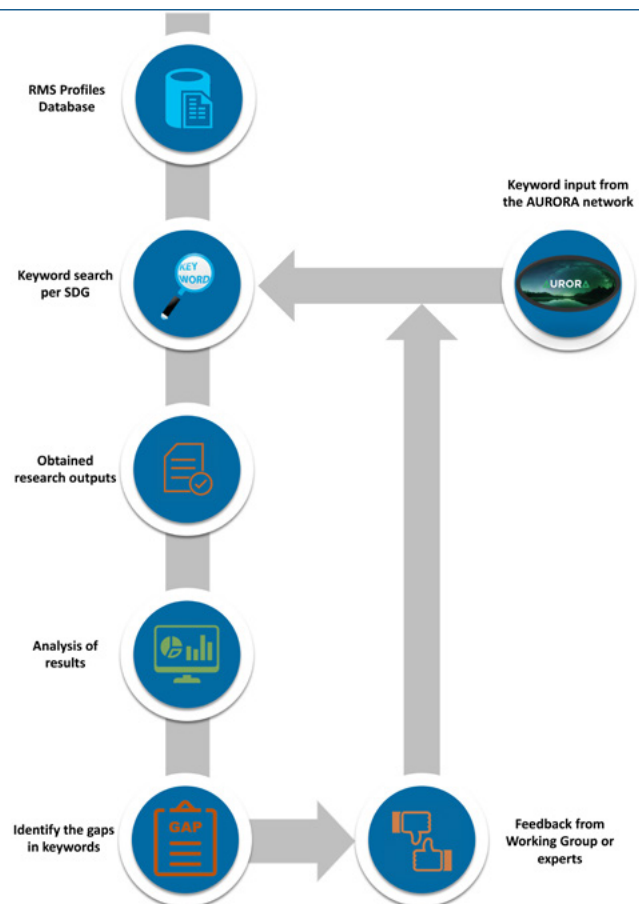
While COVID is one of the most immediate of the global challenges facing humanity, it is not the only one. The challenges of sustainability, harnessing the power of digital technologies, sustaining health, and empowering humanity also depend on the advances of research and innovation. UCD is committed to delivering on the SDGs as a fundamental pillar of our research and innovation.

SDG RESEARCH OUTPUT

It is critical that we have a full understanding of how UCD's research activities contribute to the knowledge base that informs delivery of the SDGs and that we can work with others to ensure our knowledge has an impact on societies and economies. UCD's research publications reflect the breadth and depth of work conducted at the University and are the clearest dataset on which to assess our current contribution to the SDGs.

We used a modified version of the Aurora Universities Network methodology to assess our contribution and the process used is shown in the diagram.

<https://aurora-network.global/project/sdg-analysis-bibliometrics-relevance/>

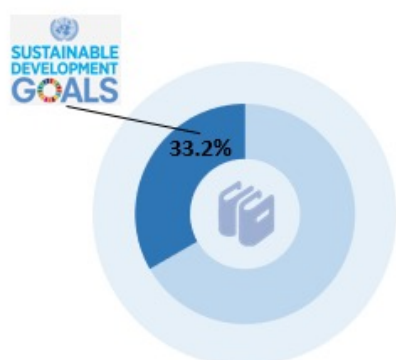




The following three charts summarise the results of the mapping activity and provide details of UCD's research activities aligned with the SDGs:

- as a percentage of total output and author base
- in each SDG
- as a connected network map showing the interdependencies of SDGs on each other

Research outputs



9,593 publications in total
3,185 publications mapped on SDGs

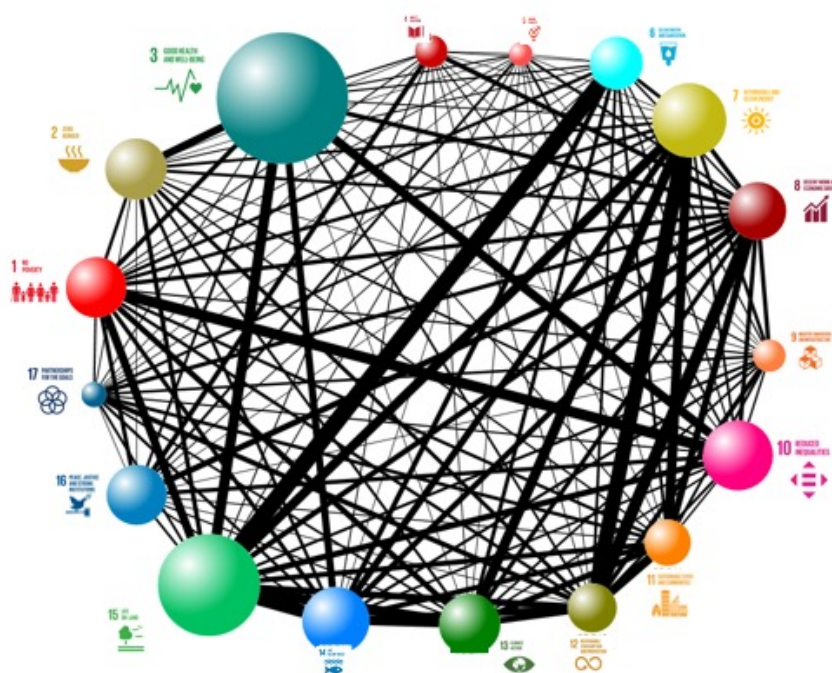
UCD authors



1,717 authors in total
1,119 authors mapped on SDGs

Figure 2: Percentage of UCD's total publication output and author base aligned with SDGs

One-third of UCD's total publication output, or 3,185 publications, address to the SDGs. More notably, over 65% of UCD's total faculty and research staff publishing during the same period contributed to advancing knowledge related to SDGs.



- The size of each node represents the volume of publications
- The width of each line represents the volume of shared publications

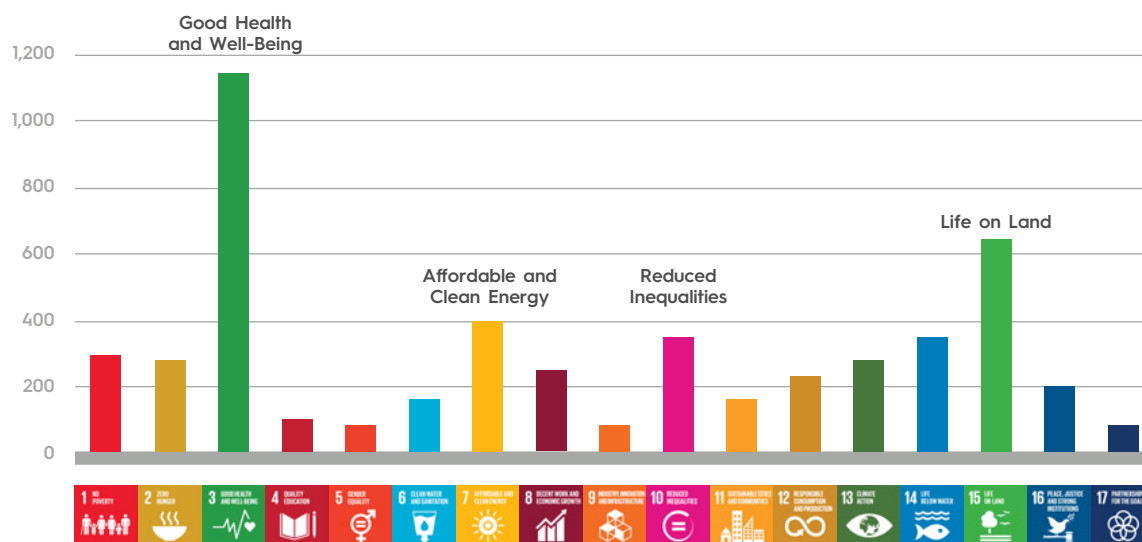


Figure 3: Volume of research outputs aligned with SDG areas

The interconnections between the research outputs highlight the interdependent nature of the SDGs. Many of the solutions to the challenges set out by the SDGs can only be resolved through understanding these interdependencies and assessing the optimum solutions across many diverse parameters. UCD's Research Institutes and Centres are all working on interdisciplinary challenges relating to the Goals, developing outputs that represent both technical solutions as well as evidence-based policy recommendations to address many of the challenges around energy, food security, sustainability, equality and health.



HIGHLIGHTS

Research and impact highlights include:

- The launch of the UCD Research, Innovation, and Impact Strategy for 2021-2024 'Shaping the Future' which emphasises excellence in all aspects of the University's research, innovation, and impact activities, nationally and internationally.
- A Research Partner working in partnership with our academic community on each of the four strategic themes. Together they develop large-scale interdisciplinary and collaborative programmes that support the development of excellent research and showcase UCD's areas of strength, scale and relevance.
- The launch of the UCD COVID Response website and virtual 'Researchers Tackling the Crisis' Seminar Series showcasing how UCD researchers are working to address the full diversity of challenges arising from the pandemic from public health to the broader societal impacts. This research relies on novel collaborations across a broad set of disciplines and with a range of engaged national and international partners.
- UCD Earth Institute collaborated with UCD Alumni on a series of UCD in Conversation events with influential faculty and alumni discussing sustainability topics spanning building a sustainable future with business, ending hunger and achieving the SDGs.
- UCD's Earth Institute has launched a number of research themes led by academics spanning arts, humanities, social sciences and law disciplines and working collaboratively with STEM researchers. These themes include:
 - 'Sustainable Communities' which explores topics including: making cities and human settlements inclusive, safe, resilient and sustainable; social cohesion and citizen involvement to advance change and improve the way we make decisions; the environmental degradation and its impact on issues of well-being and happiness, poverty and inequality; the development in the Global South and marginalised communities.
 - 'People, Work, Society' This theme crosses multiple fields including Arts, Business, Education, Humanities, Law, the Sciences, and Social Sciences. The People, Work and Society research theme is founded on the ideas of social, economic and ecological progress on a sustainable basis. UCD researchers examine these themes at the level of the individual, families, groups, teams, organisations, movements, industries, governments, multi-stakeholder initiatives, and at the societal level.
- AgTechUCD, a new AgTech Connector Innovation Hub based at Lyons Farm, provides start-ups with access to on-farm experimental facilities, allowing testing and trialling of products and services in a real-world environment. Start-ups can also access UCD's food processing facilities, Venture Capital and Business Angels networks, mentoring, corporate partners, and office and laboratory spaces. The Innovation Hub is a focal point for the agtech innovation ecosystem and a showcase for the best that Ireland has to offer the world helping towards future-proofing the sustainability and resilience of the agri-food sector.
- Investment of €28 million in the iCrag SFI Research Centre for Applied Geosciences hosted at UCD. iCrag is focused on developing innovative science and technology to better understand the Earth's past, present, and future and to focus on the creation of solutions for a sustainable



society. These include developing Ireland's wind energy capacity off the East Coast. This funding will enable iCrag to drive research in areas that are critical to society and the economy, including the sustainable discovery of energy resources and raw materials required for decarbonisation, climate change mitigation and adaptation, securing and protecting groundwater and marine resources and protecting society from Earth's hazards such as flooding and landslides.

- The appointments of UCD Staff who have provided significant contributions to sustainability policy, e.g. Professor Michelle Norris' appointment by government to chair the Housing Finance Agency, Professor Kevin O'Connor membership of EU Mission Board on climate change, Professor Tasman Crowe's role as chair of government advisory group on the expansion of Ireland's Marine Protected Area network and as chair of the National Biodiversity Forum, Professor Donna Marshall's government advisory role on sustainable supply chains during the pandemic and role as President of the International Purchasing and Supply Education and Research Association (IPSERA), Andreas Hoepner's membership of EC Technical Expert Group on Sustainable Finance.
- UCD's Humanities Institute has allocated €12,000 to the Environmental Humanities Research theme for a project "Cultural Imaginaries of Just Transitions: Fostering Interdisciplinary Discussion on Research and Teaching of Contemporary Ecological Challenges." Dr Treasa De Loughry in the School of English, Drama and Film will lead the project which will involve several workshops, podcasts and publications related to the teaching and research of cultural responses to just transitions. It will develop intra- and cross-college discussions on teaching and research related to the equitable transition from fossil fuels to renewables, to include the critical work of the environmental humanities, and to query what cultural imaginaries might aid in envisioning new modes of sociality, work, and human-nature relations.
- Dr Orla Murphy, UCD School of Architecture, Planning and Environmental Policy has been appointed to the EU New European Bauhaus high-level roundtable, an initiative launched last year by Ursula von der Leyen, EU Commission President. This is a creative and interdisciplinary initiative to design future ways of living, situated at the crossroads between art, culture, social inclusion, science and technology. This is a significant appointment to a high-level EU advisory committee.
- MoLI, the Museum of Literature Ireland, was awarded the prestigious Gold Award in the Environment category at the 40th International Design Excellence Awards (IDEA). Organised by the Industrial Designers Society of America, these are one of the longest-running and most distinguished awards in the design world. This most welcome result is an acknowledgement of the wonderful collaborative work between a broad team of UCD colleagues, the National Library of Ireland and the exhibition designers Ralph Appelbaum Associates.
- Professor Andreas Hoepner, UCD Michael Smurfit Graduate Business School, and Dr Theodor Cojoianu, visiting fellow at Smurfit and lecturer in finance from Queen's Management School, were appointed to the Platform on Sustainable Finance at the European Commission. They are the only finance scientists from Ireland selected to join the group, which will aid the Commission in creating a more sustainable 'green' financial system for the European Union and were appointed based on their world-class expertise related to environmental management and sustainable finance. They will work alongside 50 selected members and 10 special observers, drawn from academia, civil society and the business sector based on their environmental, sustainable finance or social/human rights expertise.



SPOTLIGHT

FARM ZERO C, TAKING PRACTICAL STEPS TOWARDS A ZERO CARBON DAIRY FARM

The BiOrbic SFI Research Centre at UCD has been at the centre of the drive for sustainability of our resources on land and at sea. It seeks to minimise waste by using novel technologies to convert traditional waste streams from food production to useful bio-based products. It partners with industry, farmers, local communities and many research partners to do this. It is at the centre of Ireland's emerging bioeconomy and has led the way for its many partners.



Now, led by Professor Kevin O'Connor, they are turning their expertise to the major challenge for Irish farming – how to run a net-zero emissions dairy farm that is still a viable business. The challenge is immense. Dairy farms emit 5% of global GHGs. Winners of the Science Foundation Ireland Zero Emissions Challenge, the project aims to demonstrate how renewable energy, livestock feed, and planting different types of grasses and clovers can boost biodiversity and soil health, while also reducing how much methane gas animals produce.

The project will integrate farm and satellite data, habitat mapping and natural capital accounting to provide users with information on the carbon footprint of their activities and to develop strategies to mitigate these. The goal is that Shinagh Farm will achieve net-zero emissions by 2027, with plans to extend this strategy to a further 5,000 farms within five years.

CENTRE FOR IRISH TOWNS

The UCD Centre for Irish Towns (CfIT) brings together researchers and stakeholders from across the Island of Ireland to support the revitalisation of Irish towns. Irish towns are ideally placed to help accommodate predicted population growth and facilitate sustainable communities. Towns also have a key role in the transition to a post-pandemic and low carbon society. CfIT has identified a number of research themes that are cross-referenced to the SDGs and relevant targets and indicators:

- Understanding our towns;
- Respecting our heritage and culture;
- Supporting resilient and sustainable communities;
- Promoting inclusive and innovative economies;
- Design for resilient infrastructure;
- Championing nature-based solutions;
- Promoting open and participatory democracies;
- Ensuring an inclusive and fair decarbonisation pathway.





SPOTLIGHT

ISCAPE – IMPROVING THE SMART CONTROL OF AIR POLLUTION IN EUROPE

Associate Professor Francesco Pilla's project iSCAPE aims to integrate and advance the control of air quality and carbon emissions in European cities through the development of air pollution remediation strategies, policy interventions and behavioural change initiatives. It will tackle the problem of reducing air pollution at target receptors with an innovative SME-led approach, focusing on the use of Passive Control Systems and "Living Labs" in urban spaces, on policy intervention and behavioural changes of citizens lifestyle.



The project has created a guide for community groups, SMEs and local authorities in the six participating cities who want to explore low-cost air quality sensors and citizen science methodologies.

WATERLANDS

Wetlands provide essential services for landscapes and society by retaining and purifying water, removing pollutants and excess nutrients, storing atmospheric carbon, moderating flooding and coastal storms, supporting an immense variety of wildlife, and offering recreational, well-being and employment opportunities to surrounding communities.



However, when mismanaged, these valuable services are lost. We are experiencing a rapid global loss of biodiversity and an increase in the frequency of environmental disasters associated with climate change. The restoration of wetlands and reduction of environmental risk is more important than ever.

WaterLANDS, led by UCD's Dr Craig Bullock and Dr Shane McGuinness aims to assess and demonstrate how this can be achieved in different landscape and social settings. More specifically the partners will work together to:

1. Provide a demonstration of upscaling on a large scale.
2. Identify barriers to restoration and integrated solutions for upscaling.
3. Foster cross-sectoral and interdisciplinary collaboration to co-create restoration.
4. Apply a community-led paradigm in the co-design of restoration.
5. Ensure that relevant past experience informs future wetland restoration.
6. Provide tailored financial solutions and resources for restoration.
7. Incubate a restoration legacy by showing the basis for upscaling.

Building a more sustainable and resilient landscapes, restoration of ecosystem services should go hand in hand with the development of socio-economic incentives.



PARTNERSHIP AND ENGAGEMENT

OVERVIEW

UCD continues to build its engagement, locally nationally and globally ensuring that our research is both informed by and relevant to wider society and that our student's learning is relevant to their communities and the wider world. Opportunities are being provided for staff and students to avail of mobility initiatives, both virtually and physically, to support the development of intercultural competencies and enhance our capacity to actively contribute to an ever more globalised society.

Our alumni, across almost every nation of the world, are an important part of our UCD community. We actively connect with, inform, empower and mobilise our alumni to become involved in support of the wider University, so that they actively contribute to our growth and development, whilst also ensuring they find value and relevance in UCD.

We have an extensive network of partners across all areas of the university spanning governments, industry, civic society organisations NGOs and communities. We are often the convenor of networks involving all these actors, a role we benefit from enormously as well as contribute to.





HIGHLIGHTS

Highlights of UCD's partnership and engagement activities include:

- The UCD Earth Institute and School of Geography have partnered with a community group, Dundrum 2030, to develop an SDG dashboard (<https://dundrumtwentythirty.com/>) for the local community. This empowers local people and groups to monitor the implementation of the Sustainable Development Goals at local level and to develop initiatives within their own communities and neighbourhoods.
- UCD's One Health vision promotes the health and well-being of humans, animals and the environment through academic excellence, collaborative research, education and outreach.
- The Health Science Group (HSG) has promoted a theme entitled: *"One Health: A Collaborative Approach to Health"*, as a response to the global health crisis. Key outputs include initiatives focussed on enhancing individual health and in particular, by taking a leadership role in health research and social transformation through collaborative interdisciplinary projects.
- UCD chairs the U21 Community of Practice in Sustainability Group, a self-managed, collaborative initiative that provides a route within the U21 network for members to gain new professional perspectives, share ideas and resources by making international links and connecting with counterparts across the world within the sustainability framework. The group's current focus is on Climate Conscious Travel, Leadership, and Energy Conservation.
- Through discussion and inquiry-based learning, the UCD Explore Programme provides an exciting educational space for primary school students from disadvantaged areas in Dublin and surrounding areas to play and learn. Students are introduced to science and scientists working to solve real-life problems through simple scientific experiments.
- In 2021, in conjunction with Worldwide Universities network, Dr Orla Kelly in the School of Social Policy, Social work and Social Justice, led a project called "Education in a Warming world: a collaborative research network on education and Climate change". This project aimed to build a coalition of researchers' working at the intersection of the climate crisis, and education—broadly defined. The members of this consortium have a broad range of expertise in climate science, education, human health and well-being, policy, social science, science communication, and sustainability literacy. They also have extensive geographic experience with coinvestigators participating from across the UK, Europe, Australia and Africa.
- UCD has joined UN Academic Impact to engage with a worldwide network of 1400 member institutions in 147 countries to align institutions of higher education with the United Nations in supporting and contributing to the realization of United Nations goals and mandates, including the promotion and protection of human rights, access to education, sustainability and conflict resolution.
- A number of directors of UCD Institutes and UCD-led SFI Research Centres were among the founder members of the All-Island Climate and Biodiversity Research Network to engage with other third level institutions and stakeholders to address key sustainability challenges.

SPOTLIGHT

UCD ENERGY INSTITUTE WORKING IN PARTNERSHIP TO DECARBONISE IRELAND'S ENERGY SYSTEM

UCD's researchers have partnered with the electricity system operators in Ireland for many years. Together, their successful partnership enabled the Irish grid to integrate renewable energy sources at much higher rates than international comparators. Building from this strong base, UCD's Energy Institute is now leading national efforts to create a zero carbon energy system in partnership with industry partners ESB, Eirgrid, SSE, Ervia and AIB. Their research on the grid, renewable technologies and green fuels such as hydrogen, is complemented by their focus on societal and financial models that will drive adoption of new technologies.

They are also a strong voice in the national and international policy debates about a the transition to a zero carbon future. UCD's Energy Institute was a lead partner in the 2021 Dublin Climate Dialogues virtual conference, which was broadcast from UCD. The conference brought together senior government representatives from the US, China, Europe, UK and the UN along with high-profile business representatives and leading economists to forge a declaration on how to turn net-zero pledges into concrete energy policies and actions to be adopted at COP26. Recommendations included ways to strengthen the 2015 Paris Agreement. The Declaration was presented by Minister Simon Coveney to the UK COP Presidency at the conclusion of the conference.





SPOTLIGHT

UCD VOLUNTEERS OVERSEAS (UCDVO)

The SDGs acknowledge the vital role of global citizenship and education, including development education, in building conditions for a more peaceful, fair, and sustainable world.

Target 4.7 of Goal 4 calls on countries to *'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 not violence, global citizenship and appreciation of cultural diversity and culture's contribution to sustainable development'*.

This target creates an imperative for Ireland to provide quality education on global citizenship. Development education is an essential component in delivering Ireland's commitment under Target 4.7 and raising awareness of the 17 goals.

UCD Volunteers Overseas (UCDVO) supports awareness-raising and engagement with the SDGs across our development education courses and events. Courses for volunteers and the wider UCD community incorporate the SDGs, providing participants with an understanding of the goals and how they, as individuals, can get involved in campaigns relating to specific goals, such as social justice. UCDVO participants have engaged in SDG Awareness weeks on campus by presenting their experience on the UCDVO Programme and their involvement in the SDGs.

This follows from UCDVOs engagements through local and international volunteering activities including with international partners in Tanzania, Uganda, and India working on initiatives geared towards driving quality education, public health programmes, mutual learning and community rehabilitation.



SPOTLIGHT



UCD IN THE COMMUNITY

The UCD in the Community initiative is geared towards supporting and promoting civic engagement across the UCD community and to connect UCD staff and students with the wider community for mutual benefit. It brings skills and expertise to support community-based organisations and in exchange, empowers the UCD community as socially aware citizens. Additionally, we aim to showcase current projects, teaching and research that work in a collaborative manner and contribute to positive and sustainable social outcomes.

This UCD in the Community initiative underpins UCD's involvement in the IUA Campus Engage programme. This programme was established to promote civic and community engagement as a core function of Higher Education Institutes (HEIs) across Ireland, by better enabling HEI staff and students to engage with their local communities.

UCD works with Community Based Organisations (CBOs) concentrates on collaborations across health care, the environment, quality education and access to technology, to name but a few. CBOs are typically staffed by community members who experience first-hand the needs of their local communities. Hence, UCD's focus is on encouraging students and employees with similar interests to volunteer with CBOs.

Invitations are extended to all UCD employees to become more involved in the community by offering their knowledge and expertise in a mutually beneficial and sustainable way. There are four main components of the promotion of civic engagement; community or service-based learning and research, engaged research, student volunteering and metrics and evaluation. UCD, has therefore introduced an Employee Volunteering Policy which supports UCD employees by allowing them to allocate working time to engage in volunteering activities.

Furthermore, there are a wide range of volunteering opportunities for students at UCD. With such a large range of clubs and societies there's something to suit everyone. Studentvolunteer.ie is an online tool that supports students wishing to volunteer in their communities.
<https://www.studentvolunteer.ie/ucd>

Interest in volunteering abroad has been growing steadily for many years in UCD. International volunteering allows students to have new experiences, learn from other cultures and develop skills such as leadership, teamwork, and communication.

UCD values the expertise of graduates and welcomes them as an active part of the UCD community of alumni volunteers. Hence it creates opportunities for Alumni engagement through the UCD Alumni Volunteering Programme built on the UCD values of Excellence, Integrity, Collegiality, Engagement and Diversity. This Programme gives alumni the opportunity to contribute to the UCD community as graduates through online mentoring, speak and hosting events.



SPOTLIGHT

CAMPUS ENGAGE

Campus Engage works to embed, scale and promote accredited student community-based learning and teaching (CBLT) on campuses across Ireland.

Community-based learning and teaching are academic approaches that seek to enhance student learning outcomes, while working in partnership with civic and civil society organisations (CSOs) to act on local and global societal challenges.

One example of community engaged learning is the Re-Imagining Dublin module at UCD. Led by Assoc. Prof. Niamh Moore-Cherry in association with not-for-profit A Playful City, Sean Harrington Architects, and Dublin City Council, the project focuses on harnessing student creativity and insights on a particular part of Dublin city.

The purpose of the partnership is to empower students to develop the skills to actively contribute to shaping their urban environments. From the perspective of A Playful City, this module provided a way for them to build capacity to further their agenda on developing more inclusive urban environments.

The project also gave Dublin City Council new insights, ideas and creative outputs to inform how they are working to shape Dublin City. Students developed a range of graduate attributes that strongly enhance their employability.

More information is available here:

www.campusengage.ie/wp-content/uploads/2021/10/UCD-Campus-Engage-CEL-Case-Study.pdf

Campus Engage is working to bring higher education teaching staff, students, and communities together to address societal challenges through the curriculum.





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