



# Sustainability Summer School

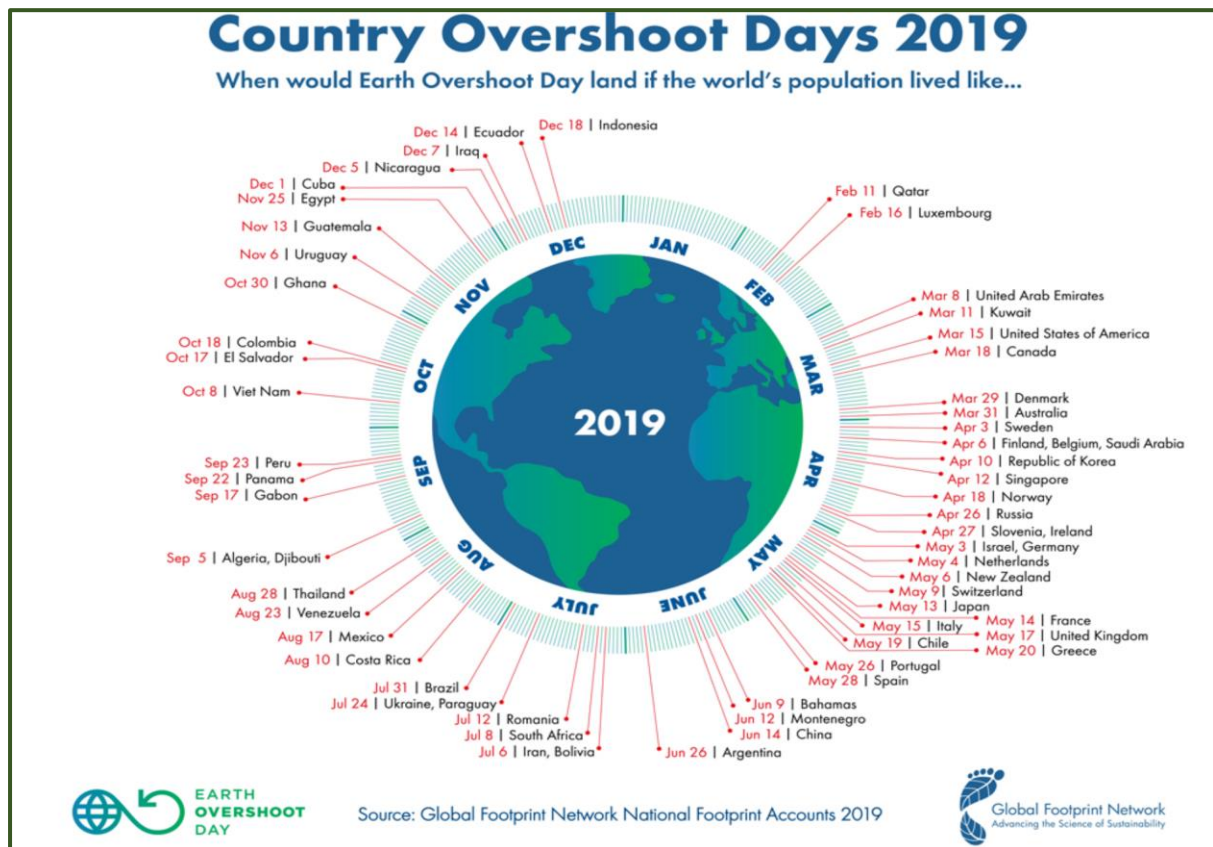
TU Dublin May 25–June 5 2020



## Are you interested in to solving our climate crisis?

*As a specialist in your field of study, why not meet students from all over the world and work in multidisciplinary teams on important sustainability projects? Suited to students from all disciplines and all levels, this project-based course, focused on Sustainability, will be organised by Technological University Dublin, in one of the cultural capitals of Europe.*

Population proliferation and technological advances have brought humans an unprecedented capacity to alter the natural environment on a global scale. This year, humanity had consumed its full natural resource budget by 29th July, faster than the planet's ecosystems can replenish.



During the course of the two weeks, the Polytechnic Alliance Summer School is offering you the opportunity to develop your systems thinking skills, to be a disciplinary specialist in your professional or research field and to perform under real-life working conditions, solving complex sustainability problems in a variety of areas related to the **2030 UN Sustainable Development Goals**, such as transportation, construction, urban planning, energy, water and sanitation, food production, access to education and healthcare, communications, responsible consumption and waste management and pollution control.

Among other things, you will meet students and teachers from around the world, work across multidisciplinary fields and acquire useful experience for the sustainability jobs of the future.

In recognising that sustainability is affected by all aspects of human living, TU Dublin is organizing the 2020 Polytechnic Alliance Summer School, in collaboration with its partner universities, as a project-based course, touching on vital areas of interest, including ecology, sociology, geography, economics and carbon accounting that inform the sustainability challenge. Participants will work in small teams where all members combine their knowledge and experience and use design thinking approaches to develop novel solutions to super-wicked problems posed by the project that requires your expertise.

### Sustainability Summer School Projects as Super-Wicked Problems



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- + Chronic Policy Failure
  - + Time is running out
  - + No central authority to coordinate efforts.
  - + Those solving the problem are causing it.
  - + No single body capable of enforcing solutions.
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*I don't want your hope. I don't want you to be hopeful. I want you to panic ... and act as if your house was on fire."*

Greta Thunberg



## INDICATIVE SCHEDULE

### SUNDAY 24<sup>th</sup> May – Arrival

#### MONDAY 25<sup>th</sup> May

09.30 Welcome to the Summer School  
10.30 Coffee Break  
11.00 Important things to know about Dublin  
12.30 Lunch Break  
13.00 *Guest Lecture*  
14.00 -18:00 Intro to Projects, Teams & Coaches  
18.30 Group Dinner and Project Presentation

#### TUESDAY 26<sup>th</sup> May

09.30 Project Work  
12.30 Lunch Break  
13.00 *TU Dublin Campus Tour*  
15.00 Exploration of Dublin City – Viking Tour

#### WEDNESDAY 27<sup>th</sup> May

09.30 Project Work  
12.30 Lunch Break  
13.00 *Guest Lecture*  
14:00 - 18.00 Project Work  
18.30 Group Dinner

#### THURSDAY 28<sup>th</sup> May30

09.30 Project Work  
12.30 Lunch Break  
13:00 *Guest Lecture*  
14.00 – 18:00 Project work  
18.30 Group-Dinner

#### Friday 29<sup>th</sup> May

09:30 Project Work  
12:30 Lunch  
13:00 *Guest Lecture*  
14:00 Various Site Visits



### Saturday 30<sup>th</sup>

Students will be required to arrange one fieldtrip to a key site contributing to sustainability in Ireland and report back on Tuesday 2<sup>nd</sup> June. Examples could include:

- [Turlough Hill](#) and [Glendalough](#)
- [Community Windfarm](#)
- [Luas Depot](#)
- [Scandinavian Homes](#)
- [CloghJordan Eco Village](#)
- [Panda Recycling Facility](#)
- [Rediscovery Centre](#)
- [Lightsource Solar Farm](#)
- Poolbeg [Waste to Energy](#) Facility
- [Sonairte Ecology Centre](#)
- Huntstown [Anaerobic Digester Bioenergy](#) Plant

### Sunday 31<sup>st</sup> Monday 1<sup>st</sup> June

Social and Cultural Programme

- [Guinness Storehouse](#) – Irish Brand Experience
- [Cliffs of Moher](#) and [The Burren](#) Atlantic Way
- [Giants Causeway](#) - Irish Myths & Legends

### Tuesday 2<sup>nd</sup> June

09.30 Project Work  
12.30 Lunch Break  
13.00 Guest Lecture  
14:00 - 18.00 Project Work  
18:30 Irish Cultural Show & Dinner

### Wednesday 3<sup>rd</sup> June

09.30 Project Work  
12.30 Lunch Break  
13.00 Guest Lecture  
14:00 - 18.00 Project Work  
18:30 [Irish Cultural Show & Dinner](#)

### Thursday 4<sup>th</sup> June

09.30 Poster Presentations at Polytechnic Summit  
12.30 Lunch Break  
14:00 - 18.00 Sustainability Round Table at Polytechnic Summit

**Friday 5<sup>th</sup> June:** Attendance at the Polytechnic Summit, Lunch, Sum Up and Farewell

## Indicative Projects

### Building Vibrant and Sustainable Local Communities in Ireland

Rural depopulation remains an unresolved issue in Irish society since the Great Famine in 1845. Prior initiatives to address rural decline have not worked and largely conceived in pre-sustainability paradigm. Students will work with once such community to in the West of Ireland to examine it how it could develop vibrancy and resilience using sustainable development principles.

*Dr Cormac MacMahon, TU Dublin*



### Planning & Designing – like Your life depended on it!

Students will be required to design a new urban area with a self-contained urban plan for sustainable living. The project will provide an opportunity for students to explore the social, political, economic and environmental impacts of climate change on migration and on employment in an urban context, and the most effective policy practices to ensure a robust sustainable future.

*Dr. Kirk Alter, Purdue Polytechnic*

### Consumer Living on the Go!

Using principles of the circular economy, students will enact locally sustainable solutions for the make-use-dispose provision of bottled water, providing them the opportunity to explore circular solutions for consumers to reduce plastic packaging in production and consumption systems, including how we could reduce plastic packaging we buy and dispose on the go. During this period, students will be engaged in product ideation and development; from brainstorming to design of a sustainable alternative to this not only local, but global issue of bottled water.

*Dr. Jennifer Astwood, UW Stout*

### Designing Healthy Cities

Small measures like greening the facades of houses, to plant a few trees, to establish playgrounds, or one-way roads, to implement electric mobiles, inner city toll, or pedestrian zones in cities is not enough. A more radical and fundamental approach is needed: At the centre of a healthy city project is the necessity to bring the pedestrian back into the street and to turn the power hierarchy in the city defined by speed and horsepower upside down. “Slow is beautiful!”

*Prof. Dr. Bernd Steffensen*

### Using Technology to Enhance Sustainability

This project will examine how technologies such as artificial intelligence can be used to introduce, enhance or secure sustainability. The output of the workshop will be the creation of an interactive educational game, which will allow students to optimise sustainable activity. The project will explore new technologies (e.g. electrification of the automotive sector), how sustainable these new technologies are, and hidden factors involved in these areas

*Dr. Philip Lewis, Coventry University*



## Accommodation



Student accommodation for the summer school will be located less than 10-minutes' walk to TU Dublin's new Grangegorman campus. A selection of student rooms is available in newly refurbished apartments. Each room comes with a double bed, storage and study workspace. Each apartment has a shared bathroom and stylish shared living and kitchen area. The property includes WIFI, 24-hour security, bicycle storage, outdoor and indoor meeting space.

