WHERE THERE IS NO ENGINEER

engineers without borders ireland

Designing for Community Resilience

engineers without
borders ireland

Creating Climate Change Problem Solvers

The uncertainties of climate change and a post-Covid world, along with challenges in achieving the Sustainable Development Goals (SDGs), demand new approaches.

Graduates will be required to identify, define and solve problems at the boundaries of traditional disciplines. “Where There Is No Engineer” (WTINE) is a design initiative that offers students this opportunity.

Creating a Community of Global Professionals

Every year **EWB Ireland** and the **Development Technology in the Community (DTC) Research Group** at TU Dublin work with one of our development partners around the world to present participants with the opportunity to design creative solutions to real world problems.

WTINE provides participants with the opportunity to learn about design, teamwork and communication through real, inspiring, sustainable and cross-cultural development projects.

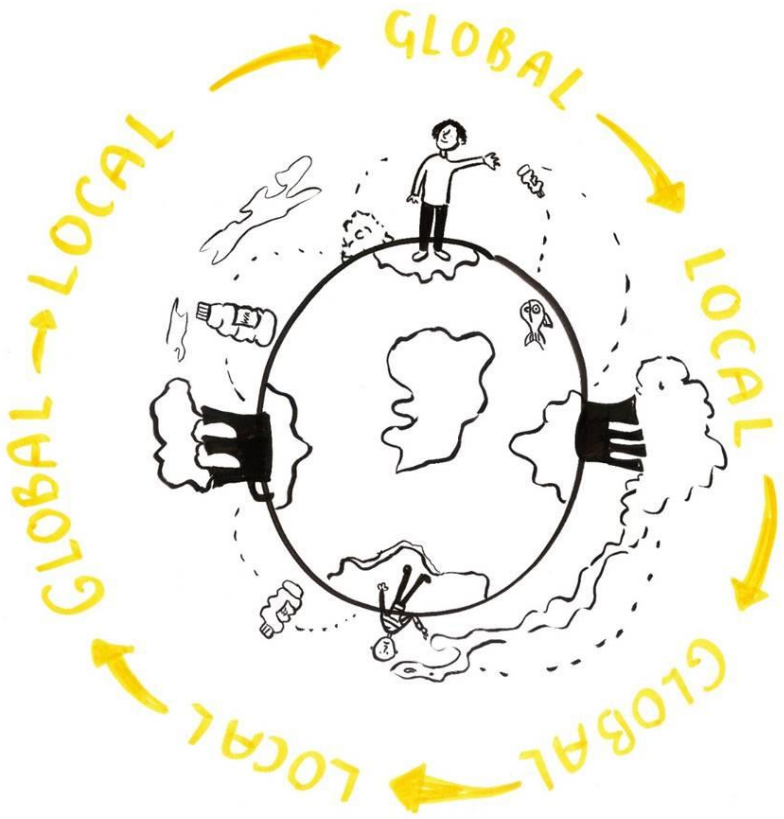
Competition Overview

Development without Borders

The Sustainable Development Goals (SDGs) are a call to action for us all to create **a world of Enough, For All, Forever**.

The WTINE initiative gives lecturers the opportunity to **integrate the SDGs into a flexible learning module**. The program can be delivered in whatever way suits your needs.

WTINE encourages students to critically and actively engage with real life development challenges. Through their participation, students develop a clear understanding of how they can contribute to sustainable development as professionals.



Integrating the SDGs

The program is open to students across the disciplines of: engineering, architecture, urban planning, science, product design, business, the social sciences and arts, media and information technology.

Participants are challenged to apply their knowledge and skills to create change and find opportunities to improve the resilience of communities.

The initiative challenges students to integrate the Sustainable Development Goals into their design.

From Local to Global

The WTINE initiative encourages students to make the link between local and global challenges. To achieve the SDGs, it is vital that students make these links to see where they fit as agents of change.

Solutions developed by students are tested in Ireland and often implemented by communities here as well as overseas.

For example, former winners have worked with communities in Nepal and community groups here in Ireland to introduce biochar kiln technology.

WTINE Themes

The WTINE competition has six themes or resilience networks:

- **Climate Resilient Infrastructure**
- **Self Supply Water and Sanitation**
- **Community Participatory Health**
- **On and Off Micro Grid Energy**
- **Food Security**
- **Communications**

Bringing the World Into the Classroom

Every year we develop design briefs with our partners based on the real life challenges experienced by a community in a particular country. These design briefs align with the six WTINE themes.

Students research the context, complete a series of workshops with EWB and DTC and design their solution. Students are introduced to the design thinking process and gain an insight into what it is like to be a professional using real life practical problems.

Bringing the Classroom to the World

Students pitch their designs/solutions to EWB judges. The best teams from each participating college are invited to participate in the National Finals.

The overall project winner gets the opportunity to travel to the program country to work with our development partners. Teams make their designs locally and introduce them to communities, engaging in dialogue with them. We also have a number of innovation awards sponsored by our partners to allow students to develop their concepts further.

WTINE Program Delivery

1. Launch

Students are introduced to EWB, the WTINE initiative and the design challenges based on the location. Students are introduced to EWB's resilience networks, which align with the SDGs.

2. SDGs Workshop

Students are introduced to the UN's Sustainable Development Goals. Students explore sustainable versus unsustainable development, economic growth and the planetary boundaries.

3. Design Reviews

Students can present their work-in-progress projects for discussion and feedback with the EWB and DTC team.

WTINE Program Delivery

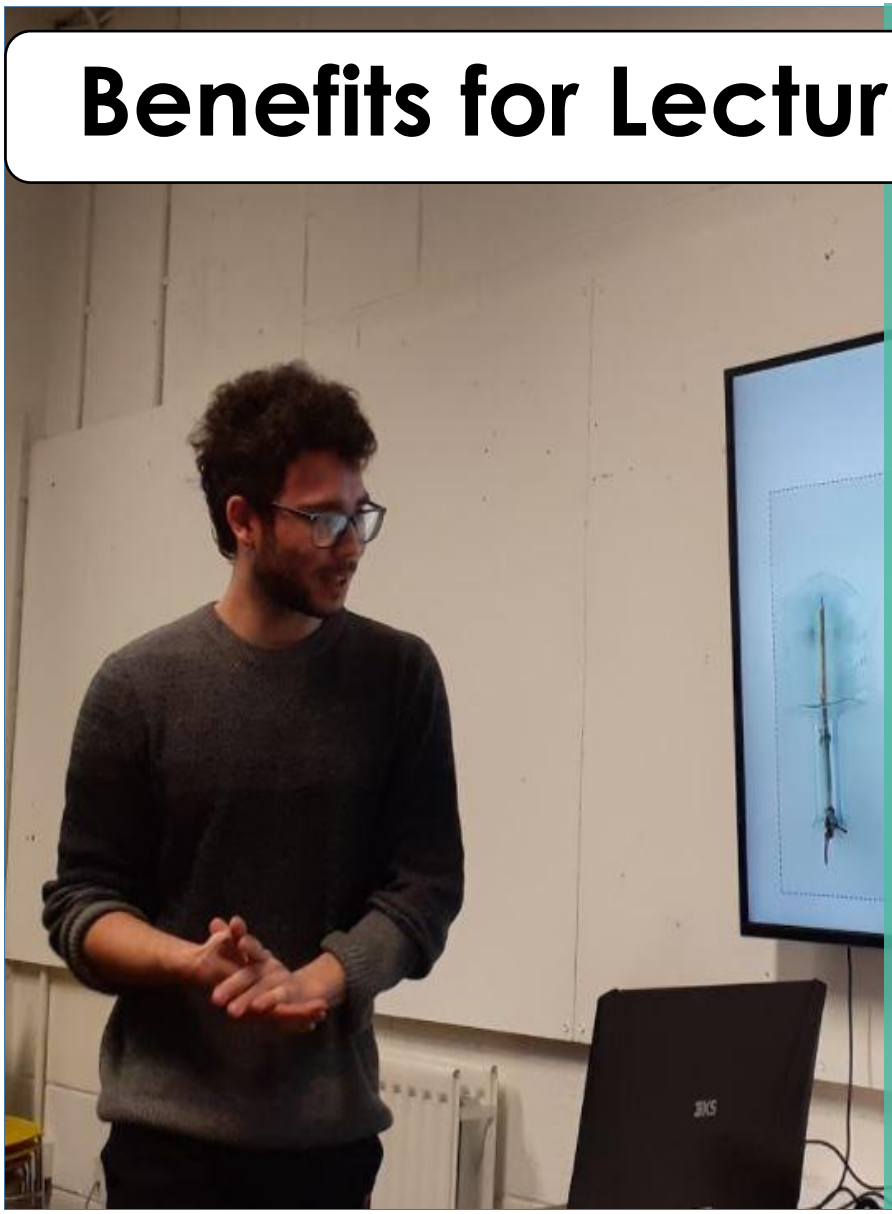
4. College Finals

Student teams pitch their ideas to a panel of EWB and DTC judges and compete with their peers to go forward to the WTINE National Finals.

5. National Finals

Finalists compete with students from other universities around the country. They pitch their final product/solution to an interdisciplinary team of judges drawn from industry, development and innovation to win a chance to develop their project in our Innovation Academy.

Benefits for Lecturers



- Integrate the SDGs into your curriculum
- Meet Engineers Ireland accreditation requirements
- Increased student engagement: students develop their creativity, entrepreneurship, leadership and communication skills
- Network with other lecturers at events

Our second year undergraduates take part in the "Where There Is No Engineer" competition, as part of their Engineering and Environment module. They work in groups to develop their ideas on energy and water themes.

It is an excellent project for the students and broadens their thinking, where they are not just developing a sustainable technology, but also an understanding of how it will be used by communities experiencing disadvantage globally.

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
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Academic Partners

Development Partners

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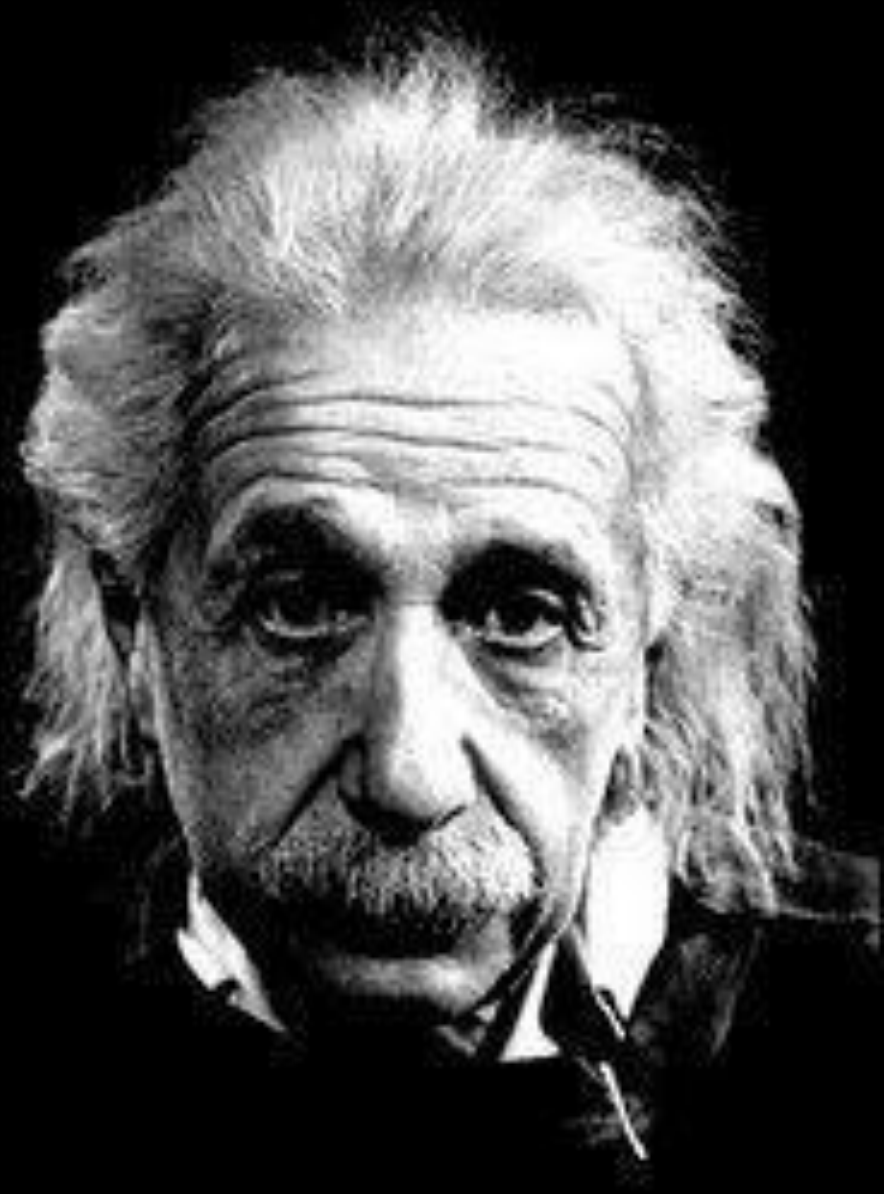
Contact Us

If you would like to bring WTINE to your university, contact Emma at: emma.brown@ewb-ireland.org

You can find out more about WTINE at:
https://ewb-ireland.org/where-there-is-no-engineer/
https://wherethereisnoengineer.org/

ARUP

This resource is funded by Irish Aid at the Department of Foreign Affairs. Irish Aid is the government's overseas development programme which supports partners working in some of the world's poorest countries. Irish Aid also supports global citizenship and development education in Ireland to encourage learning and public engagement with global issues. The ideas, opinions and comments herein are the responsibility of EWB Ireland and do not necessarily represent or reflect DFA policy.

"WE CANNOT SOLVE OUR PROBLEMS WITH THE SAME THINKING WE USED WHEN WE CREATED THEM"