



**Research Assistant ENERGE Project
Centre for the Advancement of STEM Teaching & Learning (CASTeL)
Fixed Term Contract up to 31st December 2021**

Overview

Dublin City University www.DCU.ie is a young, ambitious and vibrant University, with a mission ‘to transform lives and societies through education, research, innovation and engagement’. Known as Ireland’s ‘University of Enterprise and Transformation’, it is committed to the development of talent, and the discovery and translation of knowledge that advances society and the economy. DCU is the Sunday Times Irish University of the Year 2021.

The University is based on three academic campuses in the Glasnevin-Drumcondra region of north Dublin. It currently has more than 18,000 students enrolled across five faculties – Science and Health, DCU Business School, Computing and Engineering, Humanities and Social Sciences and DCU Institute of Education. DCU is committed to excellence across all its activities. This is demonstrated by its world-class research initiatives, its cutting-edge approach to teaching and learning, its focus on creating a transformative student experience, and its positive social and economic impact. This exceptional commitment on the part of its staff and students has led to DCU’s ranking among the top 2% of universities globally. It also consistently features in the world’s Top 100 Young Universities (currently in QS Top 70 Under 50, Times Higher Top 150 Under 100).

DCU is placed 84th in the world, in the Times Higher Education University Impact Rankings – measuring higher education institutions’ contributions towards the UN Sustainable Development Goals. Over the past decade, DCU has also been the leading Irish university in the area of technology transfer, as reflected by licensing of intellectual property.

Centre for the Advancement of STEM Teaching & Learning CASTeL

The Centre for the Advancement of STEM Teaching & Learning (CASTeL), at Dublin City University, is multidisciplinary research team focussed on enhancing science and mathematics education at all educational levels, supported by evidence-based research and contributing to international good practice. CASTeL members, comprising of scientists, mathematicians and educationalists from Dublin City University (DCU)’s Faculty of Science and Health and Institute of Education, lead and participate in formal and informal STEM education projects, nationally and internationally.

Project Background

ENERGE- Energizing Education to Reduce Greenhouse Gas Emissions (Interreg North-West Europe)

With the aging of the existing post-primary school building stock (new schools/deep retro-fits can take years from planning to completion) there is a need for low-cost solutions that enable long-term resource efficiency in schools & reduced greenhouse gas emission (GHG). ENERGE addresses this need

using targeted physical interventions that combine a web based platform & building sensors with behavioural studies & new educational approaches that enable schools engage in energy & GHG mitigation. This holistic, adaptable & multidisciplinary approach will combine sociological, pedagogic & communications expertise with low cost technology, ICT interventions & systems engineering. ENERGE will be demonstrated in schools in France, Germany, Luxembourg, Ireland, the Netherlands and the UK. Long-term impacts will be consolidated by the development of additional and revised educational material to supplement existing school curricula (for students aged 12-18 i.e. formative years). CASTeL researchers from DCU will provide pedagogic support to schools to adopt effective approaches to teaching, learning of energy and sustainability through the professional development of teachers participating in ENERGE.

Role Profile

We now wish to engage a researcher on a fixed term basis to present a literature review that informs the development of a conceptual framework for the design of teaching and learning materials (ENERGE units and activities) that promote responsible energy usage across a range of second level curricular subjects. In addition, the researcher will support the design and delivery of a programme of professional learning that supports teachers in adapting these units and activities for their own classroom practice – this will include site visits to the schools sites in France, Germany, Luxembourg, Ireland, the Netherlands and the UK.

The final phase of this project is to identify and develop strategies for increasing the use and impact of the ENERGE units and activities. The researcher will liaise with regional and national partners to identify key stakeholders and implementation strategies to achieve ENERGE long-term objectives.

Duties and Responsibilities

Reporting to the to the project Principal Investigators. The duties and responsibilities attaching to the post include, but are not restricted to the following:

- Identifying and summarising existing literature addressing energy literacy and models for teacher professional learning in energy education
- Liaising with project partners and key stakeholders
- Selecting and preparing appropriate teaching and learning materials.
- Designing and developing teaching and learning materials for online publication.
- Organising and delivering a range of professional learning workshops for teachers.
- Collaborating with teachers to pilot and evaluate teaching and learning materials.
- Preparing dissemination outputs from the project - publications, reports, presentations.
- Supporting project evaluation and reporting requirements

Qualifications and Experience

Minimum criteria

The candidate should hold a primary degree in physics or a related discipline. The candidate should also have a good understanding of second level education curricula and experience of conducting literature reviews.

In addition to the above it is desirable that the candidate possess a subset of the following skills.

- Two Year's relevant experience in a similar role.
- Excellent communication and social skills, as well as evidence of successful teamwork and a collegial approach.
- Experience of qualitative and quantitative data analysis
- The ability to work in a team and to take responsibility to contribute to the overall success of the team
- The ability to support project management in a public service university environment;
- The ability to work sensitively with a range of stake holders including students, teachers, policy makers and teacher educators.

Experience in the following areas would be advantageous:

- Experience of teaching in a school setting.
- Understanding of European second schools curricula and standards
- Awareness of the challenges of energy education with your people
- Willingness to travel to schools in partner regions.

Mandatory Training

The post holder will be required to undertake the following mandatory compliance training:

Orientation, Health and Safety and Intellectual Property and Data Protection training. Other training may need to be undertaken when required.