

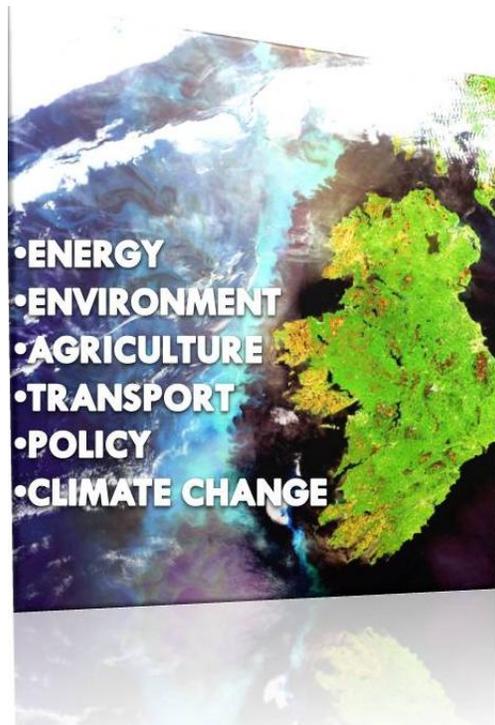
EARTH SYSTEMS INSTITUTE PHD PROGRAMME: Earth and Natural Sciences



Earth and Natural Sciences

The global change in climate and energy supplies will have a major impact on the island of Ireland, on how our economy evolves and the need for measures to protect our environment. UCD is harnessing its considerable resources to address the challenges by developing an Earth Sciences Institute. The Earth and Natural Sciences PhD programme builds on the concept that energy and environment are co-dependent, and will create a cohort of graduates with a strong background in Energy and Environmental studies, imbued with the innovation and entrepreneurial skills to develop an emerging green technology sector. In addition to a core of postgraduate students specialised in key elements of earth sciences, the programme will impact across a wide range of undergraduate and graduate programmes. It is only by influencing the collective skills of future graduates emanating from a range of disciplines that we will as a society adapt to the national and global challenges and opportunities in agriculture, energy, food, forestry, green technology, land resources, nanoscience and water.

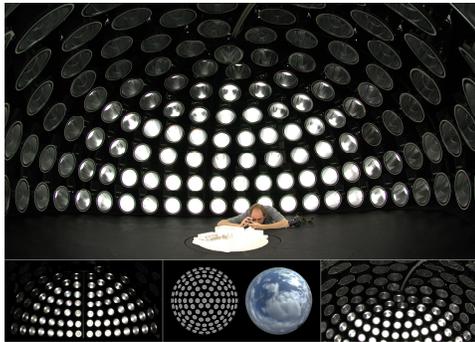
The ESI PhD programme forges a collaboration between Irish and international scientists, policy makers and industry to create the graduates who will play a major role in developing a knowledge-based economy that is competitive and yet protects its fragile environment. The graduate programme is based upon national guidelines and the recommendations and findings of the OECD, and is aligned to national and international strategies towards developing a green technology sector.





Collaborating Institutions

The Structured PhD Programme in Earth and Natural Sciences is a new multi-institutional collaborative Ph.D. programme involving University College Dublin, Trinity College Dublin, Queen's University Belfast, the National University of Ireland, Galway and the University of Limerick.



Structure of the Programme

Students will be embedded within the PhD programme at three levels:

1. Structured Component: There will be a focus on innovation, transferable and horizontal skills training including those provided by the TCD-UCD Innovation Academy and the NUI GALWAY Ignite Graduate Education Programme;
2. Disciplinary Component: Students will be embedded in a coherent discipline-specific programme;
3. Research Component: Students will focus the majority of their time on original research organised into 6 interdisciplinary themes that address key global challenges.

Training will prepare the student for industry, academia and government agencies where they will contribute to the emergence of a global reputation, the national deployment of green technology and sustaining the competitiveness of Irish industry. Graduate training will draw on and embed students in strong disciplines and multidisciplinary teams of specialists working on thematic research areas.

Research Areas

Students will be embedded within 1 of 6 disciplinary education strands. Their research projects will be aligned with one of the six major multidisciplinary research themes. In this way students will gain:

- A deep understanding of their discipline.
- Experience of original research that addresses issues of national and global import.
- A high level of technological expertise and understanding of a broader range of technologies.
- First-hand experience on how diverse knowledge can be integrated to overcome major challenges and/or to sustainably exploit Earth's resources.



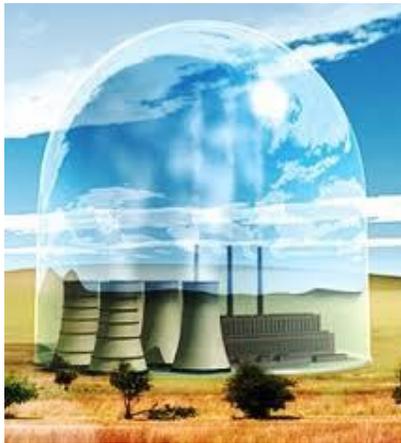


Programme Funding

The Structured PhD Programme in Earth and Natural Sciences and associated Fellowships in are funded under the Programme for Research in Third Level Institutions (PRTL) Cycle 5 which is co-funded by the European Regional Development Fund (ERDF).

Thematic Strands

- *Earth Systems Science and Computational Climate Modelling* – Prof Chris Bean
- *Ecology and Evolutionary Biology* – Prof Fraser Mitchell (TCD)
- *Sustainable and Competitive AgriFood Production* – Prof Pat Lonergan
- *Energy and Environmental Engineering* – Prof Don MacElroy
- *Transport and Water Engineering* – Prof Eugene O'Brien
- *Economics and Policy Analysis* – Prof Frank Convery



For more details visit

<http://www.ucd.ie/earth/graduate/training/phdprogrammeinearthandnaturalsciences/>

Contact us

Dr Fiona Doohan
ens_phd@ucd.ie