



Waterford Institute of Technology  
INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

## Postgraduate Scholarship Information Sheet

<b>Scholarship title</b>	Radioactivity in the Irish Coastal Environment ( <a href="#">RICE</a> )
<b>Reference number (RSU provide)</b>	<b>WD_2020_02_SPONS_2</b>
<b>Supervisor(s)</b>	Dr. Claire Keary (PI), Dr. Luis Leon Vintro (UCD), Dr. Liam Morrison (NUIG)
<b>Research Group</b>	<a href="#">Environmental Radiation Research Group</a>
<b>Department / School</b>	Department of Science, School of Science and Computing
<b>Duration</b>	4 years
<b>Status: Full-time / part-time</b>	Full-time Structured PhD Programme
<b>Funding information</b>	Funding Agency: EPA Funding Programme: EPA Research Programme 2014 – 2020
<b>Value of the scholarship (per annum)</b>	Stipend: €19,000 Fees: €4,500 (Note: The above scholarship will be available for Years 1-3. Additional sources of funding will be sought for Year 4)
<b>Teaching requirement (if any)</b>	n/a
<b>Closing date and time</b>	This competition will close on the 11 <sup>th</sup> of March 2022 at 4pm (Irish time)
<b>Commencement date</b>	01 <sup>st</sup> of June 2022

### Post summary

The aim of this EPA-funded project is to provide a status update on artificial radioactivity levels in the Irish coastal environment by revisiting some of the sites from previous surveys carried out in the 1980s and 1990s whilst, at the same time, widening the scope of these surveys to include a range of natural radionuclides with a view to establish a baseline with which to assess future concentrations. Additional sample locations subject to, or potentially subject to the accumulation of naturally occurring radioactive material (NORM), such as ports and harbours, will be identified and included in the sampling. The project will seek to develop robust and accurate methods for the determination of natural radionuclides by high-resolution gamma spectrometry, and by applying these to the analysis of selected dredge material samples, consider the application of international guidelines to assess the suitability, from a radiological perspective, of the disposal of these materials at sea in relation to NORM.

### Standard duties and responsibilities of the scholarship

The PhD student is expected to undertake a programme of research, under the guidance of their supervisory team, leading to the successful attainment of a PhD. The PhD student will liaise and provide regular communication with their supervisors and collaborate as a part of the research team. The PhD student is responsible for working towards completion of their research degree program in a timely manner in line with the principles of research integrity. It is the student's responsibility to ensure continued progress of his or her academic program and thesis research and to carry out the work in the agreed plan. The student is expected to present their work at institute, national and international conferences and publish their work in leading journals.

The work will include a combination of field work (sampling), radioanalytical chemistry and radiometric determination. The PhD student will undertake modules to aid in the specialist knowledge required which will not only complement their research activity and will form a vital part of their skills training and career development plan.

A significant portion of the project work will be undertaken in the EPA's radioanalytical laboratories which are based in Dublin. The PhD student will be based mainly in the EPA laboratories with some periods of time also at WIT.

## **Person specification**

### **Qualifications**

#### ***Essential***

Applicants should hold or expect to attain, as a minimum a 2:1 Honours degree, or equivalent, in Physics or a related discipline.

#### ***Desirable***

- Appropriate Masters (Level 9 NFQ) degree or equivalent in physics or a closely related discipline
- Research or industrial experience in gamma ray spectroscopy

### **Knowledge & Experience**

#### ***Essential***

Good experimental and instrumentation skills

Mathematical and computational skills, including programming experience

#### ***Desirable***

Experience with gamma ray spectroscopy

### **Skills & Competencies**

#### ***Essential***

- Ability to work cooperatively with other researchers in a multi-disciplinary team, be analytical, have problem solving skills, be honest and trustworthy, be respectful, possess cultural awareness and sensitivity, be flexible, be safety conscious and demonstrate sound work ethics
- Research skills including data collection and data analysis
- Excellent presentation, communication and academic writing skills
- Applicants whose first language is not English must submit evidence of competency in English, please see [WIT's English Language Requirements](#) for details.

#### ***Desirable***

- Proficiency in scientific programming (e.g. Python or other)
- Experience with gamma spectrometry software

## Further information

For any informal queries, please contact Dr. Claire Keary, +353 51834087 or by email on [ckeary@wit.ie](mailto:ckeary@wit.ie)

For queries relating to the application and admission process please contact the Postgraduate Admissions Office via email "Post Graduate Admissions" [<RPGADMISSIONS@wit.ie>](mailto:RPGADMISSIONS@wit.ie) or telephone +353 (0)51 302883. Website: [www.wit.ie](http://www.wit.ie)

## Application procedure

Please download the Research Postgraduate Application Form from the WIT Website and return completed applications to "Post Graduate Admissions" [<RPGADMISSIONS@wit.ie>](mailto:RPGADMISSIONS@wit.ie) quoting **WD 2020 02 SPONS 2** in the email subject line. Please note that paper submissions will not be accepted.

Any queries relating to the application process should be emailed to [pgadmissions@wit.ie](mailto:pgadmissions@wit.ie).

P code (Office use only)

P2240

**The Institute may decide to interview only those applicants who appear from the information available, to be the most suitable, in terms of experience, qualifications and other requirements of the position.**



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