



NUI Galway  
OÉ Gaillimh


Centre *for* Adult Learning  
and Professional Development

The background of the cover is a composite image. The top half shows a view of Earth from space, with the blue and white clouds of the planet curving over the horizon. The bottom half shows a coastal landscape with a small stream flowing through a field of vibrant green seaweed or moss. The water in the stream is calm, reflecting the surrounding greenery. The sky in the background is a deep, dark blue with some lighter, hazy clouds.

# Earth & Ocean Sciences (Diploma)

Part-time Course





You should study this course if you are interested in how, why, and where we study the Earth; when key events in Earth's history occurred; and what we can learn from the past to help us deal with future challenges.

The Diploma in Scientific Studies (Earth & Ocean Sciences) aims to provide students with a broad introduction to the study of the Earth's solid geology and its coastal ocean, with hands-on, practical experience of the techniques employed within the fields of geology, oceanography and Earth observation.

The course will appeal to those with an interest in our natural environment and the outdoors. It may be professionally beneficial for geography teachers, environmental scientists, engineers, and archaeologists.

## Course Facts

NFQ Level:	7
ECTS:	30
Duration:	2 years, part-time
Fees:	EU: €990 p.a., NON-EU: €1,490 p.a.
Mode of study:	Blended Learning - this course will delivered online in Semester 1 for 2021/22 Academic year. There will be a blended learning delivery in semester 2.
Start Date:	6th September, 2021

# Course Details

The course will be delivered in a blended learning format, with 3 weekend workshops and/or field trips every semester (either Saturday or Saturday & Sunday) accompanying the online/ remote learning lecture material and exercises. For Semester 1 in 2021/22 there will not be the usual workshops due to COVID restrictions, but it is hoped that there will be at least an 'urban geology field trip' in Galway sometime during the semester which will be completely outdoors, and will not require travelling by bus/car.

## Year 1

### Planet Earth

This module introduces students to Earth as a dynamic planet. It looks at the Earth's structure, from the core to the atmosphere, emphasising the interconnectivity of Earth's systems. Topics covered include geophysics, internal and external geological processes, geological time, rock types, the water cycle, the oceans, and weather & climate. It is hoped that there will be an 'urban field trip' (in Galway City) as part of this module, depending on COVID-19 guidelines.

### Earth Materials

This module looks at minerals - the 'building blocks of rocks' - and rocks themselves. We will look at the physical and chemical properties of minerals and rocks, their occurrences and origins, and how we classify and identify them. It is planned to hold a weekend workshop in this module (in NUI Galway) early in Semester 2.

### Our Coastal Ocean

This module will introduce students to the coastal ocean, the interface between land and sea. Students will discover how both land and marine-based processes affect the coastal ocean, and how processes in the coastal ocean affect both land and sea. Students will examine how human activity in the coastal ocean both affects and is modified by processes on land and in the open sea. One key theme of this module will be to show how the water cycle ties land and sea together, including the effect of coastal geology on fresh water chemistry. It is planned that there will be a weekend field trip (based in Bundoran) during this module.

## Year 2

### Geology of Ireland

This module investigates the geology and geological history of Ireland, relating past environments and settings with their modern analogues. The module will revise and build on the topics covered in Year 1 of the Diploma. There will be a 2-day field trip as part of this module.

### The Peopled Planet

This module investigates the interaction of humans with the planet. Topics covered will include human evolution, the exploitation of natural resources (including ores, non-metallic mineral resources, soils, construction materials, and energy sources), the influence of the natural environment on societies and health, and the challenges to societies and their infrastructures posed by geological conditions & events. There will be a one-day or weekend workshop (in NUI Galway) and field trip as part of this module.

### Observing Earth

This module will introduce students to an array of remote sensing techniques used in Earth observation. This includes geophysical, airborne, and satellite technologies. Case studies will show how this information can be applied to the fields of environmental science, agriculture, archaeology, resource mapping, habitat mapping, natural hazards, and land use. An introduction to Geographical Information Systems (GIS) will allow students to generate their own maps using freely available software and databases. There will be a weekend workshop (in NUI Galway) as part of this module.





## Entry Requirements

There are no entry requirements for this diploma, and it is assumed initially that students have little or no background in science.

## Further Education/Career Opportunities

Past students of the Diploma have gone on to study for the degree course in Earth & Ocean Sciences in NUI Galway, but others have done it purely to enhance their understanding and appreciation of our home planet.

Teachers, archaeologists, surveyors, and heritage guides have found it a helpful 'add-on' to their own area of expertise.

**Apply online at:** [www.nuigalway.ie/adultlearning/apply](http://www.nuigalway.ie/adultlearning/apply)

### Find out more:

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**Web:** [www.nuigalway.ie/courses/adult-and-continuing-education-courses/earthandoceansciences.html](http://www.nuigalway.ie/courses/adult-and-continuing-education-courses/earthandoceansciences.html)