

## MODULE DESCRIPTOR

### Module Title

Environmental Impact and Risk Management

Reference	ENM231	Version	11
Created	December 2022	SCQF Level	SCQF 11
Approved	April 2006	SCQF Points	15
Amended	July 2023	ECTS Points	7.5

### Aims of Module

To provide a practical guide to the technical and scientific concepts required by those who have professional responsibility for the design, management or conduct of environmental impact and risk assessment

### Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Criticise environmental systems in terms of their biotic and abiotic components.
- 2 Evaluate different types of environment and their associated environmental impacts.
- 3 Appraise sustainability approaches to risk evaluation
- 4 Deal with essential environmental risk assessment and risk management processes in engineering project planning with respect to energy production.

### Indicative Module Content

Significance of the physical and social environments. Classifying impact (environment, economic, social, political). Quantitative and qualitative approaches to environmental resources and environmental impacts. The mechanisms by which pollutants are transported, sources and sinks of pollutants, contamination of the biotic and abiotic systems, remediation planning and execution. Environmental impact management and assessment techniques, Planning and decision-making in the project development process. Environmental Hazard and Risk Assessment. UN sustainability goals - land use. Case studies on energy transition.

### Module Delivery

This is a lecture and tutorial based full time course, with case study work, plus private study and discussion. The course is available as an online learning module with online tutor support. A blend of distance learning and direct attendance is also possible.

**Indicative Student Workload**

	Full Time	Part Time
Contact Hours	35	35
Non-Contact Hours	115	115
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

**ASSESSMENT PLAN**

If a major/minor model is used and box is ticked, % weightings below are indicative only.

**Component 1**

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4
Description:	A case study supported by a field trip.				

**MODULE PERFORMANCE DESCRIPTOR****Explanatory Text**

Component 1 comprises 100% of the module grade. To pass the module, a D grade is required.

Module Grade	Minimum Requirements to achieve Module Grade:
<b>A</b>	A
<b>B</b>	B
<b>C</b>	C
<b>D</b>	D
<b>E</b>	E
<b>F</b>	F
<b>NS</b>	Non-submission of work by published deadline or non-attendance for examination

**Module Requirements**

Prerequisites for Module	Normally a UK honours degree, or equivalent, in Engineering or related discipline at class 2.2 or above and proficiency in English language for academic purposes (IELTS minimum score of 6.5 or equivalent).
Corequisites for module	None.
Precluded Modules	This module is not suitable for students following an MSc in Professional Studies programme unless they meet the entry qualifications stipulated in the University Regulations on admission and the prerequisites above.

**ADDITIONAL NOTES**

The indicative student workload for distance learning equates to the part time and the blended learning equates to the full time as given above.

**INDICATIVE BIBLIOGRAPHY**

- 1 TRUJILLO AP, THURMAN HV, 2008, Essentials of Oceanography, 9th Ed, Pearson.
- 2 WAINWRIGHT and MULLIGAN (ed), 2013, Environmental Modelling: Finding Simplicity in Complexity [Kindle Edition], Wiley.
- 3 CRESSER M, et al, 2012, Introduction to Environmental Science: Earth and Man, Pearson.
- 4 PERMAN, et al, 2011, Natural Resource and Environmental Economics, Addison Wesley.
- 5 TOR HUNDLOE, 2021, Environmental Impact Assessment Incorporating Sustainability Principles, Palgrave Macmillan