

NUCLEAR TECHNOLOGY EDUCATION CONSORTIUM

N23 ENVIRONMENTAL IMPACT ASSESSMENT

Summary

This module introduces the main scientific principles and legislative drivers underlying the carrying out of radiological impact assessments. It covers all of the environmental phases currently in receipt of radionuclide discharges from nuclear site operations: atmospheric, terrestrial and aquatic. The module establishes the tools and methods to assess radiological impact, demonstrating state-of-the-art assessment modelling practices.

On completion, students should have obtained:

- Familiarity with the basic principles of environmental radioactivity and radiological protection.
- An array of concepts and methods central to the carrying out of radiological impact assessments.
- Experience in practical application of models to carry out assessments in a range of environmental compartments: aerial, marine and terrestrial, through practical computer workshops.

Syllabus

- Sources of environmental radioactivity.
- Principles of radiological protection.
- Principles of marine dispersion modelling.
- Practical application of marine models.
- Principles of atmospheric dispersion modelling.
- Practical application of atmospheric dispersion models.
- Environmental Protection from ionising radiation.
- Assessment of doses to biota.
- Principles of groundwater hydrology.
- Practical application of groundwater models.