

Module Title Environmental Engineering 1	Reference EN3590 SCQF SCQF Level 9 SCQF Points 15 ECTS Points 7.5 Created May 2002 Approved March 2004 Amended August 2011 Version No. 2
Keywords Water Pollution And Control, Effluent Discharge, Fluid Dynamics, Wastewater Treatment, Water Reuse	

This Version is No Longer Current

The latest version of this module is available [here](#)

Prerequisites for Module

Mathematics 2 (CM2901) and Thermofluids 2 (EN2702) or their equivalent.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To provide the student with an appreciation of factors that contribute to water pollution and the means through which it can be controlled.

Learning Outcomes for Module

Mode of Delivery

This module is a lecture-based module with tutorials, directed self-study, laboratory work and private study.

Assessment Plan

	Learning Outcomes Assessed
Component 1	4
Component 2	1,2,3

Component 2 is a closed book examination. (70% weighting)

Component 1 is a coursework which involves the selection of case study material and its presentation in the form of a report. (30% weighting)

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

1. Recognise and discuss industry's legal requirements in terms of wastewater pollutants within the UK and Europe.
2. Describe effluent discharge and dispersion in terms of fluid dynamics.
3. Describe methods of water pollution control, including process selection, recycling, and ultimate disposal of residual wastes.
4. Select methods for controlling water pollution for specific industrial applications.

Indicative Module Content

Water pollution control legislation: clean water act. Effluent discharge. Water pollution control: wastewater treatment, water reuse, ultimate disposal. Process selection and installation design.

Indicative Student Workload

	Full	Part
<i>Contact Hours</i>	Time	Time
Assessments	3	3
Lectures	24	24
Tutorials	18	18

Directed Study

Coursework	12	12
Preperation:		

Indicative Bibliography

1. KIELY, G., 1998. Environmental Engineering. 2nd ed. Boston, MA: McGraw-Hill.
2. WEINER, R.F., 2003. Environmental Engineering. 4th Ed. Oxford, Butterworth-Heinemann
3. MURALI, K.I.V. & VALLI M., 2017. Environmental Management: Science and Engineering for Industry. Oxford. Butterworth-Heinemann

Directed Self Study	25	25
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<i>Private Study</i>		
Private Study	68	68