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MODULE DESCRIPTOR

Module Title

Environmental Engineering 1

Reference	EN3590	Version	3
Created	May 2017	SCQF Level	SCQF 9
Approved	March 2004	SCQF Points	15
Amended	May 2017	ECTS Points	7.5

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

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.

Module Delivery

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

Indicative Student Workload	Full Time	Part Time
Contact Hours	45	45
Non-Contact Hours	105	105
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
Actual Placement hours for professional, statutory or regulatory body		

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ASSESSMENT PLAN

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

Component 1

Type:	Coursework	Weighting:	30%	Outcomes Assessed:	4
Description:	Selection of case study material and its presentation in the form of a report.				

Component 2

Type:	Examination	Weighting:	70%	Outcomes Assessed:	1, 2, 3
Description:	Closed book examination.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

To pass the module, you must achieve a 40% weighted average mark from the exam and coursework. In addition you need to achieve at least 35% in both the individual exam and coursework components.

Module Grade	Minimum Requirements to achieve Module Grade:
A	=>70%
B	60-69%
C	50-59%
D	40-49%
E	35-39%
F	0-34%
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	Mathematics 2 (CM2901) and Thermofluids 2 (EN2702) or their equivalent.
Corequisites for module	None.
Precluded Modules	None.

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