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Title: ENVIRONMENTAL QUALITY
Status: Definitive
Code: **7044PG** (102378)
Version Start Date: 01-08-2016

Owning School/Faculty: Civil Engineering
Teaching School/Faculty: Civil Engineering

Team	Leader
Felicite Ruddock	Y

Academic Level: FHEQ7 **Credit Value:** 15 **Total Delivered Hours:** 43
Total Learning Hours: 150 **Private Study:** 107

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	20
Practical	2
Seminar	10
Tutorial	8

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	closed book	40	3
Report	AS2	assignment 1	30	
Report	AS3	assignment 2	30	

Aims

This module examines environmental quality. It forms an understanding of the ways in which humans can affect the environment, and evaluates their impact on public

health, together with remedial measures which can be taken. It applies the concept of cross media transfer and analyses the need for an integrated approach to pollution control and its implementation. Its principal aims are:

1. To develop the students' ability to apply knowledge of the physical, chemical and biological quality of water, land and air in their natural states.
2. To provide an understanding of the possible pollutants, the effects of these pollutants on the physical, chemical and biological quality of water, land and air, (including cross-media effects) together with ways of measuring them and minimising their impact.
3. To develop an understanding of the effects of noise and its control mechanisms
4. To develop a critical awareness of current methods of pollution minimisation.

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically evaluate the relative impacts of various pollutants on each medium and the implications for cross media transfer.
- 2 Analyse and improve on existing strategies for dealing with pollution problems, including those which involve at least two media.
- 3 Develop critical awareness of own learning through reflection.
- 4 Locate, and critically analyse, relevant material from journals and other sources.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

EXAM	1	2
ASSIGNMENT 1	1	2
ASSIGNMENT 2	3	4

Outline Syllabus

1. Natural influences on the physical, chemical and biological quality of saline and freshwaters, air and land.
2. The sources, nature and effects of pollution on water, air and land quality, the impact of pollution on their use and on public health, cross-media pollution and integrated pollution control.
3. Sampling techniques and the measurement of the physical, chemical and biological quality of water, air and land, including the assessment of pollution load.
4. The development of quality standards for water, air, noise and land.
5. Quality standards for public water supply, the treatment of ground and surface waters to achieve these standards and the influence of water distribution on quality.
6. The consenting process for discharges to sewers, to ground, surface, estuarial and sea waters, trade effluent control and the treatment of urban wastewaters to achieve consent conditions.
7. Types of air pollution sources, emission inventories, emission standards and the

measures and processes employed to achieve them.

8. Land contamination by industry and agriculture, the current uses of land, the measures to control pollution and the techniques for the remediation of contaminated land.

9. Waste management and its application to land and air contamination.

10. Noise Control.

Learning Activities

Lectures, tutorials, seminars and practicals.

Notes

The module develops the technical means of limiting adverse environmental impact by minimising pollutants and their effects. It critically evaluates the problems of cross-media pollution transfer, the need for integrated pollution control and the rationales used in the development of environmental standards.