

MODULE DESCRIPTOR

Module Title

Quality Management for Engineers

Reference	ENM612	Version	3
Created	June 2017	SCQF Level	SCQF 11
Approved	March 2004	SCQF Points	15
Amended	September 2017	ECTS Points	7.5

Aims of Module

To introduce the student to the use of statistical measurements to assess system performance and to provide the student with the ability to evaluate the scientific basis of management ideas and techniques, particularly in relation to the use of statistics and the teaching of W. Edwards Deming.

Learning Outcomes for Module

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

- 1 Identify and critically discuss the theoretical basis of current management thinking and the need for a scientific approach to management theory.
- 2 Discuss, evaluate and assess the contribution of W. Edwards Deming's System of Profound Knowledge to the future development of management thinking.
- 3 Apply an understanding of variation and statistical process control techniques to the improvement of processes.

Indicative Module Content

Study of statistical techniques: Introduction to Taguchi experiments, sampling regimes, run charting and statistical process control. Identification of process improvement strategies. Introduction to the theories that underpin current management thinking. The need for conceptual thought as well as the application of techniques. The work of W Edwards Deming. The System of Profound Knowledge: Systems thinking, some knowledge of psychology and variation, theory of knowledge. The need to continually learn. Deming's 14 points.

Module Delivery

This is a lecture-based course supplemented with tutorials, computer labs and student-centred learning.

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:	Examination	Weighting:	100%	Outcomes Assessed:	1, 2, 3
Description:	Closed book examination.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

To pass the module you must achieve at least 50% in the examination.

Module Grade	Minimum Requirements to achieve Module Grade:
A	70% or above
B	60% to 69%
C	55% to 59%
D	50% to 54%
E	40% to 49%
F	below 40%
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	EN2901 Mathematics 2 or equivalent.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 DEMING, W.E., 1996. The New Economics. 2nd ed. Cambridge: MIT Press.
- 2 WETHERILL, G., 1991. Statistical Process Control: Theory and Practice. London: Chapman and Hall.