QUAL H4602: Quality

Module Title:	Quality
Language of Instruction:	English

Credits:	5

NFQ Level:	8

Module Delivered In	No Programmes

Teaching & Learning Strategies:	Teaching will be conducted using lectures and tutorials using a mixture of presentations, case studies, question and answer sessions, group discussions and online resources.

Module Aim:	• To provide students with the skills and techniques used to manage an engineering project and an understanding of the ethical requirements of a professional engineer • To provide students with specialised knowledge of quality management systems and the philosophies associated with delivering quality in products and services

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Assess the implications of Quality on the role of the engineer. Apply concepts of Quality to engineering decision making
LO2	Apply and used specific Quality management tools and techniques in engineering decisions

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
Incompatible Modules *These are modules which have learning outcomes that are too similar to the learning outcomes of this module.*
No incompatible modules listed
Co-requisite Modules
No Co-requisite modules listed
Requirements *This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.*
No requirements listed

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Module Content & Assessment

Indicative Content
• Quality Management Systems Quality, Safety & Environmental management systems standards, business excellence models & quality awards, supplier relations,
• Quality management tools and techniques Six sigma programmes, Benchmarking, Pareto diagram; cause and effect diagram, Taguchi methods, Quality Function Deployment (QFD), Design of Experiments, Statistical Process Control

Assessment Breakdown	%
Continuous Assessment	30.00%
End of Module Formal Examination	70.00%

Continuous Assessment

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Examination	Class Test: Statistical Process Control, Process Capability, Assembly of Tolerances	1,2	10.00	Week 8
Case Studies	Carlowtec Case Study: Written report for strategic objectives for company followed by in-class group exercise	1	10.00	n/a
Other	Quality Tools & Techniques: Develop electronic (spreadsheet) calculators for typical quality measurement tools and techniques	2	10.00	n/a

No Project

No Practical

End of Module Formal Examination

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Formal Exam	A final written examination will assess the extent to which the student has achieved the module learning outcomes	1,2	70.00	End-of-Semester

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

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Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Lecture	Every Week	1.50
Estimated Learner Hours	Every Week	1.50
	Total Hours	3.00