



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Quality Control Systems		
Module Code	UFMFXA-15-2	Level	Level 5
For implementation from	2018-19		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Engineering, Design and Mathematics
Department	FET Dept of Engin Design & Mathematics		
Contributes towards			
Module type:	Standard		
Pre-requisites	Mathematics for Manufacturing 2018-19		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p><b>Educational Aims:</b> To familiarise students with the principles and use of quality control techniques, quality assurance issues and quality management methods (such as QA/QC, STQM, Six Sigma and DFSS).</p> <p><b>Outline Syllabus:</b> The importance of quality in design and planning, in the completed project and in the production of goods and services will be covered. These include:</p> <p>Introduction to quality basics, definition of quality and major contributors to quality</p> <p>Strategic Quality Management (STQM)</p> <p>Designing Quality Into Products and Services (QFD, DFSS, FMEA and FTA)</p> <p>Creativity in Quality</p> <p>Quality Systems and QS Auditing (ISO9000)</p>

## STUDENT AND ACADEMIC SERVICES

Product, Process, and Materials Control

Quality Improvement Tools

Metrology, Inspection, Testing

Statistical Process Control

Variable Control Charts

Control Charts for Attributes

Quality Costs

Human Factors in Quality

**Teaching and Learning Methods:** See Assessment

### Part 3: Assessment

The main sit strategy will be as follows:

Component A: The presentation and combined oral examination are summative and assesses the students' understanding of Quality Control concepts and techniques and the rationales they have applied in the industrial scenario.

Component B: The report is structured to verify students' competence and demonstrate understanding of the specific Quality Control tools and systems applied industrially. It also requires the students to demonstrate an ability to apply this to an industrial production scenario. The report will take the form of a Quality control audit and improvement document.

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Component A: The individual presentation and Q and A session are summative and assesses the students' understanding of Quality Control concepts and techniques and the rationales they have applied in the industrial scenario.

Component B: The report is structured to verify students' competence and demonstrate understanding of the specific Quality Control tools and systems applied industrially. It also requires the students to demonstrate an ability to apply this to an industrial production scenario. The report will take the form of a Quality control audit and improvement document (Previously completed coursework will not be included).

First Sit Components	Final Assessment	Element weighting	Description
Report - Component B	✓	60 %	Project report (3000 words)
Presentation - Component A		40 %	Presentation & oral examination (12 mins presentation + 8 minutes of questions)
Resit Components	Final Assessment	Element weighting	Description
Report - Component B	✓	60 %	Project report (3000 words)
Presentation - Component A		40 %	Presentation & oral examination (12 mins presentation + 8 minutes of questions)

STUDENT AND ACADEMIC SERVICES

<b>Part 4: Teaching and Learning Methods</b>		
Learning Outcomes	On successful completion of this module students will be able to:	
	<b>Module Learning Outcomes</b>	
	MO1	Define the fundamental concepts of statistical process control, strategic total quality management and six sigma in detail
	MO2	Identify "widely-used" quality analysis tools and the quality management problem-solving techniques
	MO3	Evaluate the complexities of statistical analysis and control-chart interpretation and their work-place application
	MO4	Analyse and diagnose problems causing variation in manufacturing and service industry processes
	MO5	Assess Quality Control concepts and philosophies to construct strategies and resolve issues arising in industries
Contact Hours	<b>Contact Hours</b>	
	<b>Independent Study Hours:</b>	
	Independent study/self-guided study	114
	<b>Total Independent Study Hours:</b>	114
	<b>Scheduled Learning and Teaching Hours:</b>	
	Face-to-face learning	36
	<b>Total Scheduled Learning and Teaching Hours:</b>	36
	<b>Hours to be allocated</b>	150
	<b>Allocated Hours</b>	150
	Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p><a href="https://uwe.rl.talis.com/index.html">https://uwe.rl.talis.com/index.html</a></p>