

Module Information

2022.01, Approved

Summary Information

Module Code	4505NCCG
Formal Module Title	Quality and Process Improvement
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Nelson and Colne College Group

Learning Methods

Learning Method Type	Hours
Lecture	60

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
APR-PAR	PAR	April	12 Weeks
JAN-PAR	PAR	January	12 Weeks
SEP-PAR	PAR	September	12 Weeks

SEP_NS-PAR	PAR	September (Non-standard start date)	12 Weeks
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Aims and Outcomes

Aims	Consumers and society demand modern products and materials in the shortest of times to the highest of quality. This therefore has an impact on the production process and its ability to manufacture products and materials to a high quality with short lead times or face losing business to a competitor. This module introduces students to the importance of quality assurance, management and control processes in a manufacturing or industrial environment and the principles and theories that underpin them. On successful completion of this module students will be able to apply knowledge of the processes and applications of statistical process within an industrial setting, explain the quality control tools used to apply costing techniques, identify the standards expected in the engineering environment to improve efficiency and examine how the concept of Total Quality Management and continuous improvement underpins modern manufacturing and service environments.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Illustrate the applications of statistical process control when applied in an industrial environment to improve efficiency
MLO2	2	Analyse cost effective quality control tools.
MLO3	3	Determine the role of standards in improving efficiency, meeting customer requirements and opening up new opportunities for trade.
MLO4	4	Analyse the importance of Total Quality Management and continuous improvement in manufacturing environments.

Module Content

Outline Syllabus	Topics included in this module are: • tools and techniques used to support quality control• attributes and variables• testing processes• costing modules• the importance of qualifying the costs related to quality• international standards for management (ISO 9000, 14000, 18000)• European Foundation for Quality Management (EFQM)• principles, tools and techniques of Total Quality Management (TQM) • implementation of Six Sigma.
Module Overview	
Additional Information	

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Essay	Case Study Analysis	50	0	MLO1, MLO2
Dissertation	Assignment	50	0	MLO3, MLO4

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Christian Matthews	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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