Liverpool John Moores University

Title:	Applications of Quality Systems and Project Management
Status:	Definitive
Code:	**6104MAN** (121989)
Version Start Date:	01-08-2022
Owning School/Faculty:	Engineering
Teaching School/Faculty:	Engineering

Team	Leader
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Academic Level:	FHEQ6	**Credit Value:**	20	**Total Delivered Hours:**	26
Total Learning Hours:	200	**Private Study:**	174		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	12
Practical	6
Tutorial	6

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	Quality and Project Mgt	50	
Exam	AS2	Examination	50	2

Aims

To introduce students to the principles and techniques of Total Quality Management. To examine in detail the elements which contribute towards the quality management systems from the perspectives of people, techniques and systems. To gain knowledge of the fundamental concepts of creating and managing projects.

Learning Outcomes

After completing the module the student should be able to:

1	Understand the concepts and principles of total quality management
2	Apply a range of quality techniques (e.g. QFD, FMEA, SPC) to monitor, analyse and improve manufacturing processes.
3	Understand the entrepreneurial process and how an idea leads to a project. Demonstrate knowledge and understanding of the concepts and practice of project management.
4	Analyse and critically appraise a project in terms of time, cost and quality.

Learning Outcomes of Assessments

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

Quality and Project Mgt	1	2	3	4
Examination	1	2	3	4

Outline Syllabus

Background and evolution of the quality movement.
Quality gurus and the cost of quality.
Quality control procedures, process capability and statistical process control techniques.
Quality management systems - standards and models: ISO9000:2000.
Business improvement techniques - FMEA, QFD and value management.
The six sigma approach, its methodologies, the DMAIC project model.

Understanding the entrepreneurial process and creating innovative solutions to industry problems. How an idea leads to a project.
Project definition, the characteristics of projects in various fields of engineering.
The project management life cycle. Project scope. Project planning to achieve cost, time and quality objectives. Network techniques and the use of Gantt charts. Project execution. Quality and risk management of projects.
The role of the project manager and project teams.
Closing a project.

Learning Activities

This module is taught through a combination of lectures, tutorial, small group work, video case studies and workshops, and use of relevant software where appropriate.

Notes

This module aims to equip the student with important underpinning engineering skills relating to project management and quality systems. A student must therefore successfully complete all sections of the module to a satisfactory level.

In this module, the knowledge learning outcomes are K5, K6 and K7, the skills learning outcomes are S2 and the behaviours learning outcomes are B5.