Liverpool John Moores University

Title:	LEAN MANUFACTURING
Status:	Definitive
Code:	**5504NCCG** (129437)
Version Start Date:	01-08-2021
Owning School/Faculty:	Engineering
Teaching School/Faculty:	Nelson Campus

Team	Leader
Christian Matthews	Y

Academic Level:	FHEQ5	**Credit Value:**	20	**Total Delivered Hours:**	60
Total Learning Hours:	200	**Private Study:**	140		

Delivery Options
Course typically offered: S1, S2, Sum, NS2 (S2 for Jan)

Component	Contact Hours
Lecture	60

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	Case study	Case Study Analysis	50	
Report	Assignment	Assignment	50	

Aims

This module will look at how manufacturers and their associated supply chain utilise lean methodologies to achieve process and production commitments. The aim of this module is to introduce students to the tools, techniques, principles and processes associated with lean manufacturing, so that they can become an effective and committed practitioner of lean within the world of industry, business and commerce. In doing so students will consider both the benefits and challenges of using lean manufacturing, and become sufficiently knowledgeable about the processes, tools and techniques to be able to operate and use them.

Learning Outcomes

After completing the module the student should be able to:

1	Examine the common principles of lean manufacturing and how the implementation of a lean production system contributes to business success.
2	Evaluate a given case study against widely adopted approaches to lean manufacturing
3	Specify a range of the process improvement tools used within lean manufacturing.
4	Demonstrate effective communication skills in order to lead the process of continuous improvement across an organisation.

Learning Outcomes of Assessments

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

Case Study Analysis	1	2
Assignment	3	4

Outline Syllabus

Among the topics included in this module are:
• scoping and defining lean manufacturing
• the benefits and challenges of adopting Lean
• common tools and techniques associated with lean manufacturing and process improvement
• the most appropriate improvement tool(s) to tackle a problem.
As part of the module students will consider the tools and techniques used to support quality assurance and control including:
• the impact of attributes and variable data
• 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.

Learning Activities

Lectures
These will not normally be traditional didactic lectures in which the student plays little active part, but will be delivered in small groups of up to 20 students in which their interaction with their tutor is a key ingredient of their learning experience.

Students will receive approximately 30 hours of taught material, supported by in-class exercises and discussions designed to help student assimilate learning and to provide early informal feedback on their progress.

Independent Study
Students are expected to undertake personal reading and research into topic areas that have been stimulated from the lectures and seminars. This reading will enhance their academic work and enable valid contribution to lectures and seminars.

VLE support
This will provide links to academic web-sites and on-line journals, facilitate group discussion outside of the classroom, access to outline lecture notes, and provide students with assessment details.

Notes

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