

Liverpool John Moores University

Title: Manufacturing Systems Design
Status: Definitive
Code: **6500MTC** (125791)
Version Start Date: 01-08-2019

Owning School/Faculty: Maritime and Mechanical Engineering
Teaching School/Faculty: Maritime and Mechanical Engineering

Team	Leader
Rob Darlington	Y

Academic Level: FHEQ6 **Credit Value:** 20 **Total Delivered Hours:** 41
Total Learning Hours: 200 **Private Study:** 159

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Online	24
Tutorial	15

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Work based learning activity	50	
Exam	AS2	Examination	50	2

Aims

To provide students with an understanding of the principles of design of manufacturing systems so as to be able to analyse and (re)design a manufacturing system that maximises performance and minimises waste.

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically evaluate the performance of a manufacturing system and recommend design changes to improve performance
- 2 Simulate the performance of a manufacturing system by developing a graphical simulation model using an industrial simulation tool.
- 3 Design procedures to evaluate and interpret the results of the simulation model

Learning Outcomes of Assessments

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

Work based learning activity	1	2	3
Examination	1	2	3

Outline Syllabus

Design of factory layout. Human factors in workspace design. GT and cellular manufacturing. Approaches to factory layout. Selection of manufacturing system. Manufacturing System modelling and analysis using simulation. Optimisation of manufacturing systems;

Learning Activities

Online lectures and tutorials, campus based tutorials, work based learning

Notes

The module provides students with an understanding of the principles of design of manufacturing systems and the ability to analyse and (re)design a manufacturing system that maximises performance and minimises waste.