

## Liverpool John Moores University

Title: AUTOMOTIVE MANUFACTURE  
Status: Definitive  
Code: **6010TECH** (105327)  
Version Start Date: 01-08-2016

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

Team	Leader
Ian Jenkinson	Y

**Academic Level:** FHEQ6  
**Credit Value:** 12  
**Total Delivered Hours:** 30  
**Total Learning Hours:** 120  
**Private Study:** 90

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	20
Practical	10

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	A.M.T Assignment	30	
Essay	AS2	Operations Management Assignment	40	
Essay	AS3	Quality Management Assignment	30	

### Aims

*This module covers the highly automated and sophisticated computerised manufacturing and operational systems found in a top tier OEM, Automotive manufacturing facility. It will give students an insight into the issues of a modern manufacturing plant and how these issues are managed.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Identify and understand the advanced manufacturing technology found in an automotive manufacturer.
- 2 Describe the manufacturing operations management systems employed in large automotive organisations.
- 3 Understand and apply modern quality management system methodologies.

## Learning Outcomes of Assessments

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

CW	1
CW	2
CW	3

## Outline Syllabus

*Advanced Manufacturing Technology:*

*Factory layout; cellular layout; group technology; flexible manufacturing systems; flexible manufacturing cells; CAD/CAM/CIM; assembly; automation; robotics.*

*Operations Management:*

*Inventory management; MRP/II; ERP; JIT; lean manufacturing; total productive maintenance.*

*Quality Management:*

*Quality assurance and controls; changing roles of operators/ inspectors; statistical process control, process capability, acceptance sampling; total quality management and six sigma quality.*

## Learning Activities

This module will be delivered with a series of structured lectures and practical sessions. Extensive use of case studies will be adopted to put the subject into context.

## Notes

The delivery method will take a holistic approach in delivering the learning outcomes. This shall be done with the use of case studies that place the subject into context and integrates the topics within the syllabus. A factory visit will also add to the student experience.