

Liverpool John Moores University

Title: Innovation Development
Status: Definitive
Code: **6131ENG** (117194)
Version Start Date: 01-08-2016

Owning School/Faculty: Electronics and Electrical Engineering
Teaching School/Faculty: Electronics and Electrical Engineering

Team	Leader
Adam Papworth	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
Tutorial	10

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Design Feasibility Report	40	
Portfolio	AS2	Group Product Development Project	60	

Aims

This module covers the role of product innovation and development in terms of a business and its organisational management, processes and technologies

Learning Outcomes

After completing the module the student should be able to:

- 1 Implement suitable innovation management systems.
- 2 Recognise and follow design and development processes to realise effective design solutions.
- 3 Use common design time compression technologies to capture, reproduce and test design solutions.

Learning Outcomes of Assessments

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

report	1	
project	2	3

Outline Syllabus

Innovation Management:

Definition of innovation; forms of innovation; new product, new processes, new markets' new materials and resources, new organisational structures; innovation theory; innovation funnel; disruptive innovation V's sustaining innovation; open / closed innovation; design push to market pull; product life cycle.

Processes:

Traditional approach; integrated and systematic approach to innovation; innovative environment; concurrent and reverse engineering; teamwork and creativity; market research management and market analysis; product research; demand forecasting; trends; lifecycle assessment / costing; feasibility studies; quality functional deployment; risk management; failure mode and effect analysis; value analysis / engineering; functional analysis and systems technique.

Technologies:

CAD / CAM; CAE; 3D lazer scanning; rapid prototyping; vacuum cashing; physical and virtual models / prototypes testing

Learning Activities

A series of lectures, tutorials and practical design classes will be used, supported by case study examples to place theory into context.

Notes

This module covers the management of innovation from an organisational and marketing perspective. It encourages students to apply a systematic and integrated approach to innovation management systems and techniques.