

Liverpool John Moores University

Title: Design Prototyping & Production
Status: Definitive
Code: **5002PD** (117712)
Version Start Date: 01-08-2011

Owning School/Faculty: Liverpool School of Art & Design
Teaching School/Faculty: Liverpool School of Art & Design

Team	Leader
Martin Gee	Y
Jon Spruce	
Jeanette Tunstall	
Sarah Moriarty	
Sabine Kazich	
Stephen Bowe	

Academic Level: FHEQ5 **Credit Value:** 24.00 **Total Delivered Hours:** 72.00

Total Learning Hours: 240 **Private Study:** 168

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	6.000
Practical	24.000
Seminar	9.000
Tutorial	9.000
Workshop	24.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Artefacts	AS1	Design project with modelled solutions	70.0	
Report	AS2	Report	30.0	

Aims

- 1: To enable the development of design concepts appropriate to particular market needs, manufacturing constraints and other business considerations
- 2: To provide experience in the development and implementation of design concepts in line with practical manufacturing considerations
- 3: To develop students awareness of appropriate materials and their selection within the design process
- 4: To develop students ability to communicate and evaluate design solutions through the production of prototypes

Learning Outcomes

After completing the module the student should be able to:

- 1 1 Demonstrate an ability to develop a concept with reference to business, materials and manufacturing considerations
- 2 2 Model a design proposal appropriate to defined production methods and thereby demonstrate technical skills of a basic professional standard
- 3 3 Demonstrate an awareness of materials, manufacture and their appropriate selection
- 4 4 Demonstrate their design intent through physical and virtual modelling methods

Learning Outcomes of Assessments

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

Artefact	1	2	4
Report	3		

Outline Syllabus

Business influences in manufacturing
Market considerations
Scales of production (low / high volume)
Material selection
Manufacturing and production processes
Assembly and component construction methods
Prototyping and Model making techniques

Learning Activities

This module builds on the students existing knowledge of materials and manufacturing processes, engaging students in a deeper understanding and evaluation of influences that may affect a design prior to production. The understanding of influences, external to the design studio is key in developing a product that is a viable business proposition. The consideration of factors within the design development process with respect to human, commercial and environmental

influences informs both the designer and the other stakeholders involved in the products production

This module introduces information via lectures and seminar discussions, highlighting key influences, and is further supported by external designers/retailers/manufacturers. The design students will undertake a design project which will allow them to design a product and communicate their design intent and decisions made through the use of the presentation of physical and virtual models. A design project report further communicates their design decision making process.

References

Course Material	Book
Author	Ashby, M. and Johnson, K.
Publishing Year	2009
Title	Materials and Design
Subtitle	The Art and Science of Material Selection in Product Design
Edition	2nd Ed
Publisher	Butterworth-Heinemann, Oxford
ISBN	

Course Material	Book
Author	Goslett, D.
Publishing Year	1984
Title	Professional Practice of Design
Subtitle	
Edition	
Publisher	Harper Collins, Glasgow
ISBN	

Course Material	Book
Author	Lefteri, C.
Publishing Year	2007
Title	Making It
Subtitle	Manufacturing Techniques for Product Design
Edition	
Publisher	Laurence King Publishing, London
ISBN	

Course Material	Book
Author	Lefteri, C.
Publishing Year	2005
Title	Wood
Subtitle	Materials for Inspirational Design
Edition	

Publisher	Rotovision, Hove
ISBN	

Course Material	Book
Author	Lefteri, C.
Publishing Year	2005
Title	Plastic
Subtitle	Materials for Inspirational Design
Edition	
Publisher	Rotovision, Hove
ISBN	

Course Material	Book
Author	Lefteri, C.
Publishing Year	2005
Title	Ceramics
Subtitle	Materials for Inspirational Design
Edition	
Publisher	Rotovision, Hove
ISBN	

Course Material	Book
Author	Lefteri, C.
Publishing Year	2005
Title	Metals
Subtitle	Materials for Inspirational Design
Edition	
Publisher	Rotovision, Hove
ISBN	

Course Material	Book
Author	Lefteri, C.
Publishing Year	2005
Title	Glass
Subtitle	Materials for Inspirational Design
Edition	
Publisher	Rotovision, Hove
ISBN	

Course Material	Book
Author	Lefteri, C.
Publishing Year	2006
Title	Plastic 2
Subtitle	Materials for Inspirational Design
Edition	
Publisher	Rotovision, Hove
ISBN	

Course Material	Book
Author	Lesko, J.
Publishing Year	2008
Title	Industrial Design
Subtitle	Materials and Manufacturing Guide
Edition	2nd Ed
Publisher	John Wiley and Sons, New York
ISBN	

Course Material	Book
Author	Thompson, R.
Publishing Year	2007
Title	Manufacturing Processes for Design Professionals
Subtitle	
Edition	
Publisher	Thames and Hudson, London
ISBN	

Course Material	Website
Author	
Publishing Year	
Title	http://www.csd.org.uk
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Website
Author	
Publishing Year	
Title	http://www.britishdesigninnovation.org
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Website
Author	
Publishing Year	
Title	http://www.designcouncil.org.uk
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Website
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Author	
Publishing Year	
Title	http://www.ted.com
Subtitle	
Edition	
Publisher	
ISBN	

Notes

This module is intended to expose the design student to the different aspects of taking a design concept, through to a design proposal, and the influences that may affect the selection of an appropriate material or production method. It engages students in the physical production of design solutions via the use of a range of prototyping and Model making techniques.