

Liverpool John Moores University

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Title: DESIGN PRINCIPLES AND APPLICATION
Status: Definitive
Code: **4206BEHN** (119873)
Version Start Date: 01-08-2018

Owning School/Faculty: Built Environment
Teaching School/Faculty: Built Environment

Team	Leader
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Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 72
Total Learning Hours: 200 **Private Study:** 128

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	24
Tutorial	24
Workshop	24

Grading Basis: BTEC

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Housing Project Design	50	
Test	AS2	ICA	50	

Aims

o To introduce the fundamental concepts concerning the design of dwellings in respect of: building form, function, historical precedent and impact upon the environment.

- o To develop knowledge and understanding of the range of drawings.*
- o To introduce the roles and responsibilities of the various parties working in the construction industry.*
- o To develop an understanding of the performance of buildings and the influence that materials and workmanship specification have upon performance.*

Learning Outcomes

After completing the module the student should be able to:

- 1 Discuss the significance of historical, social, technological & environmental influences on domestic architecture.
- 2 Apply basic principles of design to the planning, design and specification of a domestic dwelling.
- 3 Generate 2D drawings of a simple building design using manual drawing techniques.
- 4 Identify the various factors that affect the selection of materials, systems and equipment, in order to evaluate the environmental impact on the planning, design and construction process of a domestic dwelling.
- 5 Carry out a material specification of a domestic dwelling.
- 6 Understand the methods of construction typically applied within the industry.

Learning Outcomes of Assessments

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

Housing Project Design	1	2	3	4
ICA	5	6		

Outline Syllabus

A brief introduction to history of domestic architecture in the UK: architectural historical precedent; influence of social, technological and environmental changes; and the relationship of buildings to their context.

Basic design principles: client requirements, user factors; site constraints; design ergonomics; project; influence of shape, size and proportion; position; location; environmental impact; material specification, design layout and technology; and renewables.

Develop an understanding of the purpose and importance of building specifications and their relationship to the design drawings. Roles and responsibilities of the main parties in the construction industry, and the RIBA plan of Work Stages.

Site specific problems associated with possible contamination and the need for remediation. Substructure – Soil conditions, excavations and foundation types.

Superstructure – Design and specification with consideration of sustainable construction along with planning and building control.

Learning Activities

Lectures: supported wherever possible with site visits, guest lectures and videos.
Tutorials: Studio work using Drawing Boards and IT suite.

Notes

The module aims to provide the student with the fundamental concepts required to design a dwelling-house from first principles. The module also aims to demonstrate the interrelationship between: design; construction; health and safety; building regulations and environmental issues, which will assist students in other modules but also going forward into industry.