Liverpool John Moores University

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Title:	DESIGN PRINCIPLES AND CONSTRUCTION TECHNOLOGY
Status:	Definitive
Code:	**4200BEHN** (119859)
Version Start Date:	01-08-2016
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:**	60
Total Learning Hours:	200	**Private Study:**	140		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	24
Tutorial	12
Workshop	24

Grading Basis: BTEC

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Housing Design Project	50	
Test	AS2	Test AS2	25	
Test	AS3	Test AS3	25	

Aims

To introduce fundamental concepts concerning the design of dwellings in respect of

building form, function, historical precedent and impact on the environment.
To develop knowledge and understanding of the range of drawings commonly used.
To introduce the roles and responsibilities of parties working in the construction industry.
To introduce the student to construction techniques associated with low rise domestic dwellings including building services.
To develop an understanding of the performance of buildings and the influence of materials and workmanship specification on 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	Carry out a material specification of a domestic dwelling.
5	Understand the methods of construction typically applied in the formation of the above ground walls, floors, and roofs of residential buildings.
6	Explain the role of the building regulations on construction form and methodology, and the impact of sustainability on the construction form, process.

Learning Outcomes of Assessments

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

Housing Design Project	1	2	3	4
Test AS2	5			
Test AS3	6			

Outline Syllabus

A brief introduction to the history of domestic architecture in the UK; architectural historical precedent; influence of social, technological and environmental changes; 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; renewables.

Purpose and importance of specifications and relationship to drawings; performance and prescriptive types.

Roles and responsibilities of the main parties in the construction industry, and the

RIBA plan of Work Stages.

Preliminary work associated with site selection and preparation. Substructure - design and production issues, soils, foundations, excavations. Superstructure – internal and external walls, flat and pitched roofs, ground and upper floors, internal finishes, domestic services and installation, sustainable construction. Standards and Regulations - application of the approved documents, specifications these elements will be considered with regards to function, performance, durability, cost and aesthetics.

Learning Activities

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

Notes

This module introduces fundamental concepts concerning the design of dwellings in respect of building form, function, historical precedent and impact on the environment.

Moreover, this module covers the construction principles and processes associated with residential buildings. In addition, there is delivery of a good level of general construction knowledge that will assist students in other modules at levels 4, 5 and 6, and going forward into industry.