

Liverpool John Moores University

Title: Technology and Practice 2
Status: Definitive
Code: **5049AR** (117595)
Version Start Date: 01-08-2016

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

Team	Leader
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Academic Level: FHEQ5 **Credit Value:** 24 **Total Delivered Hours:** 141
Total Learning Hours: 240 **Private Study:** 99

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	55
Seminar	16
Tutorial	2
Workshop	68

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Technology Strategies relating to concurrent Design Project	30	
Test	AS2	Written Structures Test	10	
Artefacts	AS3	CAD Portfolio	15	
Report	AS4	Technology Coursework	30	
Test	AS5	Written Structures Test	10	
Test	AS6	Written Practice Test	5	

Aims

To methodically inform students in matters of environmental design, structural design, materials choice and properties and the construction of buildings on site.

Learning Outcomes

After completing the module the student should be able to:

- 1 Evaluate the energy control issues & problems in large buildings.
- 2 Examine and critically review the selection and use of building materials and the issues involved in the 'finishing' of non-domestic buildings.
- 3 Generate proposals for the environmental strategies in use in non-domestic buildings.
- 4 Analyse and evaluate the structural processes taking place within the spanning elements of a building.
- 5 Analyse and evaluate the structural processes taking place within the vertical support elements of a building.
- 6 Examine and evaluate the application of CAD and other graphical software methods in the process of architectural design and representation.
- 7 Examine and critically review Environmental Assessment Procedures and their application in architectural design.
- 8 Outline the key issues of professional practice and legal matters in the procurement of buildings.

Learning Outcomes of Assessments

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

Report 1	1	2	3
Test 1	4		
Artefact	6		
Report 2	6	7	
Test 2	5		
Test 3	8		

Outline Syllabus

This course begins a series delivered over Years 2 &3 dealing with the technical realisation of buildings through analysis, design, detailing and site construction and supervision. Within this module, the issue of Practice is included.

Lectures are presented on the technology of environmental design; artificial lighting, the use and control of mechanical systems for heating and ventilation, together with energy management and conservation. The basic concepts and principles of

acoustic design are also included.

Basic structural mechanics theory is introduced covering systems capable of spanning long distances and structural rules of thumb. Additional lectures on the detailed design of structural elements in timber, brick, concrete and steel are included.

The module also includes a sequence of 'construction' lectures continuing on from the lectures in Level 4, dealing with the 'making' of architecture. The course is structured according to the 'Common Arrangement', to allow a smooth progression into practice in the fourth 'year out'. The lectures are intended to aid the technical 'realisation' of work being produced in the design studio.

A course of lectures introduce more innovative methods of construction.

The module also has a course of a 'Professional Studies' lectures beginning a series delivered over Years 2 & 3. The aim is to introduce students to the framework of professional procedures and legal responsibilities within which architects work in England and Wales.

CAD Workshops give students the key skills necessary to represent their architectural ambitions. The syllabus covers techniques in presentation, architectural drafting, 3d modelling using both CAD and graphics methods, as well as the interface with CAD/CAM and rapid prototyping technology. A range of software is used in the key categories of CAD, BIM, analysis and graphics.

Learning Activities

Lectures and three half-day seminar/workshops in the first half of the year producing work related directly to the design module will also take place within this module. Three half-day seminar / workshops exploring technical issues relating to a generic design project are delivered in the second half of the year. There are regular CAD workshops throughout the year.

Notes

This module supports the design modules, challenging students in the technical aspects of their design development.