

Liverpool John Moores University

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Title: Environment and Technology 2: Use and application of Building Information Modelling
Status: Definitive
Code: **5131ASA** (129270)
Version Start Date: 01-08-2021

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

Team	Leader
Simon Tucker	Y
Jim Sloan	

Academic Level: FHEQ5
Credit Value: 20
Total Delivered Hours: 68
Total Learning Hours: 200
Private Study: 132

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	12
Workshop	56

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Report: BIM modelling and building analysis	100	

Aims

The aim of this module is to methodically inform students in topics of environmental design, structural design, and Computer Aided Design. The module builds on the broad introduction given at Level 4, by focussing on the technical realisation of buildings through analysis, design, and detailing.

Learning Outcomes

After completing the module the student should be able to:

- 1 Model and graphically illustrate a building design project using the specified CAD software.
- 2 Appraise the environmental performance of a building design project using the specified CAD software.
- 3 Contextualise their project with reference to relevant precepts of sustainability
- 4 Communicate succinctly through writing, drawings and diagrams an evaluation of their technological inquiries.

Learning Outcomes of Assessments

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

Report	1	2	3	4
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Outline Syllabus

Lectures series are presented on the technology of environmental design related to acoustics. 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 lectures are intended to aid the technical realisation of work being produced in the design studio

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, environmental analysis and graphics.

Learning Activities

Lectures and regular CAD workshops are delivered throughout the semester. The assessment task of this module focusses on the use of BIM for modelling and environmental analysis.

Notes

This module supports the concurrent design modules (5123 ASA and 5124ASA) though lectures and workshops, challenging students in the technical aspects of their design development. The main assessment for the module follows a series of workshops on Building Information Modelling (BIM) and environmental analysis.