

Liverpool John Moores University

Title: DESIGN, CAD & GRAPHICAL DETAILING
Status: Definitive
Code: **4604BECC** (125595)
Version Start Date: 01-08-2021

Owning School/Faculty: Civil Engineering and Built Environment
Teaching School/Faculty: Coleg Cambria

Team	Leader
Spencer Kelly	Y

Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 54
Total Learning Hours: 200 **Private Study:** 146

Delivery Options

Course typically offered: Summer

Component	Contact Hours
Lecture	20
Tutorial	20
Workshop	14

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	Portfolio of Construction Drawings	50	
Report	AS2	Specification Report	50	

Aims

This module will provide learners with the opportunity to develop the skills needed to produce construction drawings using both manual and industry-standard computer-aided design (CAD) software.

Learning Outcomes

After completing the module the student should be able to:

- 1 Produce 2D drawings using industry-standard CAD software applications
- 2 Plot drawings to various media and scales and export drawings to different formats
- 3 Produce specifications to achieve quality in design
- 4 Apply graphical communication techniques to support a design solution.

Learning Outcomes of Assessments

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

Construction Drawings	1	2
Specification Report	3	4

Outline Syllabus

2D CAD: set up drawing; drawing aids; drawing and editing commands; line weights and widths; layer convention and controls; text and dimensioning commands; changing properties; layouts; model-space; paper space; dealing with different scales on the same drawing; plotting routines; producing hardcopies

Software: operating systems; CADD software packages e.g. AutoCAD; minimum system requirements e.g. hard disk space, memory required, processor, video card

Hardware: keyboard; mouse; other input devices e.g. light pen, digitiser, joystick, thumbwheel; monitor; printer; other output devices e.g. plotter, rapid prototyping; storage e.g. floppy disk, hard disk, memory stick, CD, network

Specification of materials: specifying items (reference to British Standards, approved codes of

practice, British Board of Agreement Certificates, trade associations)

Quality solutions: NBS descriptors; ISO series; manufacturers' data sheets; BS 8000; sample

panels; employer representatives; testing

Manual drawing techniques: sketching; conceptual; technical; measured drawing

Learning Activities

Learning for this module will involve active student participation in lectures, and workshop sessions will be used for the manual production of graphical communication techniques.

Notes

This module will provide students with the opportunity to develop the skills in the preparation of construction drawings via manual draughting techniques and using CAD software.