

Liverpool John Moores University

Title: TECHNICAL GRAPHICS
Status: Definitive
Code: **4013TECH** (105279)
Version Start Date: 01-08-2011

Owning School/Faculty: Engineering
Teaching School/Faculty: Engineering

Team	Leader
Keith Metcalfe	Y

Academic Level: FHEQ4
Credit Value: 12.00
Total Delivered Hours: 36.00
Total Learning Hours: 120
Private Study: 84

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Practical	36.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Part Drawing Assignment	25.0	
Essay	AS2	Assembly Drawing Assignment	35.0	
Essay	AS3	Layout Drawing Assignment	20.0	
Essay	AS4	Schematic Diagram Assignment	20.0	

Aims

To enable the students to communicate basic technical product information through the core skill of technical drawing.

Learning Outcomes

After completing the module the student should be able to:

- 1 produce basic technical drawings of product components / parts.
- 2 produce simple assembly drawings of product designs.
- 3 produce layout drawings of a product design.
- 4 produce a range a basic schematic drawings.

Learning Outcomes of Assessments

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

CW	1
CW	2
CW	3
CW	4

Outline Syllabus

Tools: Draughting table, technical pens, pencils, paper / film, ruler, t-square, set squares, compass, protractor, common templates, stencils and drawing aids.

Preparation: Paper size and orientation, component / assembly size and complexity, views, scale and required technical information.

Types of drawings: Part drawings, assembly drawings, layout drawings.

Projections: Orthographic, first-angle / third-angle projection, axonometric, isometric, diametric and trimetric.

Multi-view drawings: Selection / number of views, auxiliary views, detail views and cross sections.

Types of line: visible, hidden, centre, cutting planes, section and hatching.

Lettering, technical annotations, machining symbols and other common conventions. Drawing threaded components.

Dimensioning: Parallel, running, chain, combined, co-ordinates, tabular, holes, circles and radii.

Schematic Drawings: Electrical / electronic circuit drawings, hydraulic and pneumatic diagrams.

Relationship to Solidworks

Learning Activities

This module will be taught through a range of practical sessions held within the drawing office.

References

Course Material	Book
Author	Simmons; C Maguire, D
Publishing Year	2003
Title	Manual of Engineering Drawing: to British and International Standards: To British and International Standards
Subtitle	
Edition	2nd
Publisher	Newnes
ISBN	10: 0750651202

Notes

This module provides the technical drawing skills and practice required by product designers necessary to communicate technical information to other designers and engineers. It is not intended for this module to be a design related subject.