

Liverpool John Moores University

Title: ENGINEERING GRAPHICS AND DESIGN
Status: Definitive
Code: **5503ENGSBC** (113903)
Version Start Date: 01-08-2018

Owning School/Faculty: Maritime and Mechanical Engineering
Teaching School/Faculty: The Sino-British College

Team	Leader
Russell English	Y

Academic Level: FHEQ5 **Credit Value:** 12 **Total Delivered Hours:** 42
Total Learning Hours: 120 **Private Study:** 78

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	20
Practical	22

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Assignment-1 Freehand sketching and isometric representation	20	
Essay	AS2	Assignment-2 Manual component drawing and projections	30	
Essay	AS3	Assignment-3 CAD modelling	20	
Essay	AS4	Assignment-4 Computer Generated Modelling/Drawing	30	

Aims

To provide underpinning skills in interpretation, reading, and production of

engineering drawings in relation to the production and manufacture of components and assembly of mechanical items.

Learning Outcomes

After completing the module the student should be able to:

- 1 read and interpret engineering part and assembly drawings
- 2 manually produce sketches and engineering drawings of components/assemblies.
- 3 produce solid models of components/assemblies using a modern CAD package.
- 4 generate 2D engineering drawings from 3D CAD solid models.

Learning Outcomes of Assessments

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

CW	2	
CW	1	2
CW	3	
CW	3	4

Outline Syllabus

Introduction to design process and engineering drawing.

Sketching techniques and artefact analysis.

Geometric construction technique.

Orthographic projections

Basics of ISO/BS8888 rules and conventions (line type, title-blocks, etc.).

Generating working drawings, (detail, assembly, layout, etc.).

Symbols and conventions (surface finish, tolerance limits and fits, etc.).

Introduction to CAD (Solidworks) : solid modelling, component and assembly design, development of 2-D drawings

Learning Activities

By a series of lectures and practical drawing sessions.

Notes

This module shall provide the fundamental skills in engineering drawing, utilizing both manual and computerized drafting techniques.