

Liverpool John Moores University

Title: Engineering Practice 1
Status: Definitive
Code: **4106SBC** (124858)
Version Start Date: 01-08-2021

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

Team	Leader
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Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 132
Total Learning Hours: 200 **Private Study:** 68

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	16
Practical	116

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	Workshop Practice & CAD	40	
Report	AS2	Formal Laboratory Report/logbook	40	
Future Focus e-learning task	AS3	Self Awareness Statement	10	
Reflection	AS4	Reflective Interview	10	

Aims

This module aims to introduce students to a range of standard engineering practices.

Learning Outcomes

After completing the module the student should be able to:

- 1 Safely carry out a range of basic workshop procedures using standard processes including the production and interpretation of CAD drawing.
- 2 Demonstrate their commitment to undertake the on-going personal development required to become a professional engineer.
- 3 Carry out an experimental procedure in a range of different engineering disciplines.
- 4 Process data collected during an experiment, and produce a formal written report with conclusions.

Learning Outcomes of Assessments

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

Workshop Practice & CAD	1	
Formal Laboratory Report/Logbo	3	4
Self Awareness Statement	2	
Reflective interview	2	

Outline Syllabus

The list below provides an indicative list of topics which may be covered in this module:

Workshop & Engineering Graphics

Workshop

- *Practical workshop skills*
- *Reading engineering drawings*
- *Tolerances & fits*
- *Measurement*
- *Health & safety*

Engineering Graphics:

This block of the module will provide students with a first course in engineering graphics, and particularly engineering drawing according to current British Standards. Topics will include:

- *BS 8888:2011 (British Standard for technical product documentation & specification)*
- *Orthographic Projections and Oblique / Isometric drawing*
- *Drawing Layouts, Sections views, Dimensioning*
- *Geometric Tolerancing and Datums, Limits & Fits*
- *Generating Engineering Drawings from 3D CAD models*
- *Introduction to general Engineering Components including Shafts, Bearings, Gears, Keyways, Fasteners, Standards*

Personal Development

- *World of Work: Bronze Award*
- *Professional body requirements*

Experimental Methods and Practice

- *Introduction to research skills*
- *Report writing*
- *Handling experimental data*
- *Graphical representation*
- *Errors*
- *Analysis of results, and the formulation of conclusions*
- *Complete a series of experiments, keeping a logbook to record notes, measurements and observations.*

Learning Activities

Workshop Activities, Laboratory experiments, Tutorials and Lectures.

Notes

The personal development portion of the module is assessed on a pass/fail basis. Students must complete the assessment exercises to a satisfactory standard in order to achieve a pass grade in this module.