Liverpool John Moores University

Title:	Engineering Practice 1
Status:	Definitive
Code:	**4506USST** (126434)
Version Start Date:	01-08-2021
Owning School/Faculty:	Engineering
Teaching School/Faculty:	University of Shanghai For Science and Technology

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	Test and appraise a range of basic workshop procedures using standard processes including the production and interpretation of CAD drawing.
2	Demonstrate commitment to on-going personal development required to become a professional engineer.
3	Experiment on a range of different engineering disciplines.
4	Analyse, process and interpret data collected during an experimental procedure.

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	
Refective 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.