

Liverpool John Moores University

Title: Engineering Practice 1
Status: Definitive
Code: **4506MECBHG** (128773)
Version Start Date: 01-08-2021

Owning School/Faculty: Engineering
Teaching School/Faculty: Beaconhouse IC Islamabad

Team	Leader
Russell English	Y

Academic Level: FHEQ4
Credit Value: 20
Total Delivered Hours: 100
Total Learning Hours: 200
Private Study: 100

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	16
Practical	84

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Artefacts	AS1	Engineering Graphics	20	
Portfolio	AS2	Personal and Professional Development	20	
Report	AS3	Experimental Methods and Practice	60	

Aims

This module aims to introduce students to a range of general engineering practices and standards.

Learning Outcomes

After completing the module the student should be able to:

- 1 Create engineering drawings using Computer Aided Design (CAD) software to current British Standards.
- 2 Undertake on-going personal development required to become a professional engineer.
- 3 Carry out experimental procedures in a range of different engineering disciplines, process the data collected, and produce a formal technical report.

Learning Outcomes of Assessments

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

Engineering Graphics	1
Personal Development	2
Experimental Methods	3

Outline Syllabus

Engineering Graphics:

- *British Standard (BS) for technical product documentation and specification (BS 8888:2011)*
- *Orthographic projections and oblique / isometric drawings*
- *Drawing layouts, sections views and dimensioning*
- *Geometric tolerancing, datums, limits and fits*
- *Generating engineering drawings from 3D CAD models*
- *Reading engineering drawings*
- *Introduction to general engineering components (e.g. shafts, bearings, gears, keyways, fasteners) and associated standards*

Personal and Professional Development:

- *Field trip / industrial visit*
- *Environmental and ethical responsibilities*
- *Team working*
- *Career planning workshop*
- *Professional body requirements*
- *Health and safety*

Experimental Methods and Practice:

- *Introduction to experimental methods*
- *Performing experiments, keeping a logbook to record notes, measurements and observations*

- *Handling and processing experimental data*
- *Graphical representation*
- *Errors, uncertainty, accuracy and precision*
- *Analysis of results and the formulation of conclusions*
- *Introduction to research skills*
- *Technical report writing*

Learning Activities

Lectures and engineering practical sessions.

Notes

Students must attempt all assessment components and obtain an overall module average of 40 % or above in order to achieve a pass grade in this module.