

Summary Information

Module Code	3508USST
Formal Module Title	Engineering and Technology Practice
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 3
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Dante Matellini	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
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Partner Module Team

Contact Name	Applies to all offerings	Offerings
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Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
University of Shanghai For Science and Technology

Learning Methods

Learning Method Type	Hours
Lecture	11
Practical	33
Tutorial	11

Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-PAR	PAR	September	28 Weeks

Aims and Outcomes

Aims	This module aims to develop the practical skills of students by applying what they learn in their mathematics and physics modules. It will provide an experience of experimental planning, execution and report writing, as well as activities aimed at developing problem solving skills. It also embeds the academic and study skills which are required for students to become effective and independent learners.
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Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Demonstrate the academic skills required to be an effective and independent learner in a higher education environment.
MLO2	Apply principles of mathematics and science to solve problems in an engineering and technology context.
MLO3	Perform a series of engineering experiments, process the data collected, and produce a formal technical report.

Module Content

Outline Syllabus

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

Study Skills:

- Skills@LJMU: Academic Study Skills, Maths and Statistics, IT Skills, Library Skills
- Read effectively and identify appropriate resources to study topical engineering problems
- Identify study needs and plan study effectively
- Work effectively in a group
- Present information in an appropriate style
- Introduction to research skills

Experimental Measurement:

- Physical quantities and SI Units
- Random and systematic errors in measurements
- Precision, repeatability, resolution and accuracy of measurements
- Uncertainty in measurement
- Representing uncertainty

Experimental Methods and Practice:

- Performing experiments, keeping a logbook to record notes, measurements and observations.
- Handling and processing experimental data
- Graphical and tabular representation of data
- Errors, uncertainty, accuracy and precision
- Analysis of results and the formulation of conclusions
- Technical report writing

Module Overview

Additional Information

This year long module supports students in developing the academic and experimental skills needed to become effective and independent learners. It includes regular contact with personal tutors, encouraging a smooth transition into Higher Education.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Portfolio	Academic Skills	40	0	MLO1, MLO2
Report	Experimental Practice	60	0	MLO2, MLO3