LIVERPOOL JOHN MOORES UNIVERSITY

Module Proforma

Approved, 2022.01

Summary Information

Module Code	4520USST
Formal Module Title	Professional Practice and the Environment
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
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

Partner Module Team

Contact Name	Applies to all offerings	Offerings

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	12
Off Site	8
Practical	44
Seminar	2

Module Offering(s)

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

Aims and Outcomes

Aims	The aims of this module are: To enhance knowledge and understanding of electrical and electronic circuits by completing a set of practical experiments; To gain experience in practical design of electronic circuits including prototyping and PCB design and manufacture; To develop professional practical skills; To undertake experimental laboratory work; To analyse and critically evaluate technical issues; To present and document ideas and results; To develop the ability in data manipulation and sorting; To develop a personal development plan and understand the impact that engineering has on the environment.

Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Safely carry out a range of basic Laboratory procedures using standard processes.

MLO2	Process data collected during an experiment, use CAD tools for design and simulation, and produce a formal written report with conclusions.
MLO3	Demonstrate their commitment to undertake the on-going personal development required to become a professional engineer. Identify and reflect upon the following aspects of personal development: strengths and weaknesses, motivations and values, ability to work with others.
MLO4	Work as a team to gather data analyse the results and discuss the benefits and issues of various affordable, renewable energy systems.

Module Content

Outline Syllabus

You will acquire essential skills in Electrical Engineering Practice through activities in four blocks:
1. Laboratory and Practical workshop skills, Health, safety and risk assessment, Reading schematic drawings, Use of Instruments and taking measurement
2. Personal Development, Ethical responsibilities, Team working, Introduction to research skills of Professional body
    requirements
3. Experimental Methods, Report writing, Handling experimental data, Graphical representation, Errors, Analysis of results, and the formulation of conclusions
4. Experimental Practice, Complete a series of experiments, Keeping a logbook to record notes, Measurements and

    observations, Product prototyping

Module Overview

Additional Information

The assessment of this module is by online assessment (online quiz). A Professional Practice test is used to assess your reflectiveness and aspirations. The Written Report is an Academic Paper students will construct for one of the lab experiments. The report is a pass/fail component. Students will answer questions on the report in an online quiz. Students will also do some fieldwork activities as part of this component. Students will also undertake a mini project in a group (team-working) where they will construct a working product. This is a pass/fail activity and students will take an online quiz based on what they did during the development of this component. The pass/fail components will negate the associated assessment if not completed.

General Notes

UNESCO Sustainable Development Goals

No Poverty
Quality Education
Gender Equality
Industry, Innovation and Infrastructure
Reduced Inequalities
Sustainable Cities and Communities
Peace, Justice and Strong Institutions

UK SPEC AHEP 4

CEng.

M8 Identify and analyse ethical concerns and make reasoned ethical choices informed by professional codes of conduct.
M11 Adopt an inclusive approach to engineering practice and recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion.
M16 Function effectively as an individual, and as a member or leader of a team. Evaluate effectiveness of own and team performance.
M18 Plan and record self-learning and development as the foundation for lifelong learning/CPD.

IEng.
B1 Apply knowledge of mathematics, statistics, natural science and engineering
principles to broadly-defined problems. Some of the knowledge will be informed by current developments in the subject of study.
B2 Analyse broadly-defined problems reaching substantiated conclusions using first principles of mathematics, statistics, natural science and engineering principles.
B3 Select and apply appropriate computational and analytical techniques to model broadly-defined problems, recognising the limitations of the techniques employed.
B4 Select and evaluate technical literature and other sources of information to address broadly-defined problems.
B5 Design solutions for broadly-defined problems that meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health and safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and industry standards.
B11 Recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion.
B12 Use practical laboratory and workshop skills to investigate broadly-defined problems.

B13 Select and apply appropriate materials, equipment, engineering technologies and processes.
B16 Function effectively as an individual, and as a member or leader of a team.
B18 Plan and record self-learning and development as the foundation for lifelong learning/CPD.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Portfolio	Portfolio	50	0	MLO1, MLO2
Reflection	Reflection	10	0	MLO3
Presentation	Presentation	40	0	MLO4