

Liverpool John Moores University

Title: PROFESSIONAL AND PRACTICAL SKILLS
Status: Definitive
Code: **4000ENG** (105209)
Version Start Date: 01-08-2016

Owning School/Faculty: Electronics and Electrical Engineering
Teaching School/Faculty: Electronics and Electrical Engineering

Team	Leader
Wei Zhang	Y

Academic Level: FHEQ4 **Credit Value:** 24 **Total Delivered Hours:** 90
Total Learning Hours: 240 **Private Study:** 150

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	24
Practical	54
Tutorial	12

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Portfolio of IT exercises	25	
Essay	AS2	Portfolio of key skills exercises	25	
Essay	AS3	Portfolio of laboratory investigations	25	
Essay	AS4	Assessed circuit building exercises	25	

Aims

*To enhance knowledge & understanding of:
IT, computation and industry-standard software tools
Engineering design methods and constraints*

Relevant management & business practices and an awareness of the economic and commercial implications of engineering decisions
Professional & ethical responsibilities
Codes of practice and/or regulatory requirements
Requirements for safe operation
To develop intellectual abilities in:
Ability to analyse systems, processes and components requiring engineering solutions
Ability to create new processes, components or systems through synthesis of ideas from a wide range of sources
Ability to evaluate commercial risks
Ability to use knowledge and understanding to evaluate technical risks
To develop professional practical skills in:
The use of relevant test and measurement equipment
The ability to undertake experimental laboratory work
The use of engineering IT tools (including programming languages where appropriate)
The practical testing of design ideas in laboratories or through simulation, with technical analysis and critical evaluation of results
Researching for information to develop ideas
To extend transferable/key skills in:
The manipulation and sorting of data
The presentation of data in a variety of ways
The use of scientific evidence-based methods in the solution of problems
The use of general IT tools
The use of creativity and innovation in problem solving
Working with limited or contradictory information
The use of effective communication for life-long learning
The use of time & resource management
The use of the engineering approach to the solution of problems

Learning Outcomes

After completing the module the student should be able to:

- 1 Confidently use IT in an engineering context
- 2 Communicate effectively using a variety of media
- 3 Confidently apply experimental methods and data analysis techniques
- 4 Safely use a range of electrical equipment

Learning Outcomes of Assessments

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

CW	1	
CW	2	
CW	3	4

Outline Syllabus

IT Skills - IT and society, Health and safety, Copyright. Hardware and software, file management, security, printing. Word processing, spreadsheets, databases, PowerPoint, the internet.

Key skills - effective studying, information sources, written communication, oral communication.

Experimental methods - measurement techniques, data collection, data analysis, data presentation, report writing.

Circuit building - Health and safety, use of breadboard, use of solder, various power supplies, wiring.

Learning Activities

Lectures, tutorial and practical sessions together with workshop practice.

Notes

The module provides a vehicle by which students can acquire essential skills in engineering. It also will provide the opportunity for effective personal tutoring.