Module Title:	Electronic Engineering Practice 2
Language of Instruction:	English

Credits:	5

NFQ Level:	6

Module Delivered In	1 programme(s)

Teaching & Learning Strategies:	A series of lectures, demonstrations and practical sessions will be used to broaden the students' knowledge of the principles and practices of analysing and building electronic circuits and systems.

Module Aim:	To give the students the required knowledge and competencies to use electronic CAD software to simulate, analyse and explore the operation of basic electronic circuits. To give students skills necessary to construct an electronic circuit from a specified schematic or design brief.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Operate in an electronics workshop laboratory with due regard for health and safety (H&S)
LO2	Understand the environmental considerations of electronics recycling. Incorporate recycled component into circuit design.
LO3	Design circuit layouts, construct prototype boards and test basic electronic circuits using appropriate tools and equipment.
LO4	Develop awareness of energy usage and measure energy usage of circuits to estimate battery life/replacement.

Pre-requisite learning	
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*	
No recommendations listed	
Incompatible Modules *These are modules which have learning outcomes that are too similar to the learning outcomes of this module.*	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements *This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.*	
No requirements listed	

Module Content & Assessment

Indicative Content
Safety and safe working practices and environmental considerations Safety precautions when soldering and using tools. Exercise proper safety procedures when working in a laboratory to ensure personal safety including general principles, eating, drinking and an understanding of electric shock hazard.
Electronic design, schematic capture and simulation. Use an industry standard package for Electronic Design and simulation of circuits.
Test and measure energy of a prototype board. Build and test circuits on breadboard and compare results with simulation software build circuits.
Soldering and assembly. Create planning sheet from schematic diagrams before soldering the circuit using strip-board.
Basic enclosure / finishing and assembly. Install finished circuit into an enclosure to complete assembly.
Lab report. Write a formal report based on the schematic diagram and instructions assigned.

Assessment Breakdown	%
Project	100.00%

No Continuous Assessment

Project				
Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Project	Students will complete a number of practical tasks and Lab assignments during the module. Students will be assessed based on the quality of their work, the design decisions they took and the application of their knowledge.	1,2,3,4	100.00	n/a

No Practical

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Practicals	Every Week	4.00
	Total Hours	4.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_EESYS_B	Bachelor of Engineering (Honours) in Electronic Engineering	2	Mandatory