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MODULE DESCRIPTOR

Module Title

Introduction to Industrial Electronics

Reference	EN2511	Version	4
Created	July 2017	SCQF Level	SCQF 8
Approved	August 2016	SCQF Points	15
Amended	September 2017	ECTS Points	7.5

Aims of Module

To enable students to have an awareness of common electronic circuits, systems and techniques used for measurement and control in industrial environments.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1	Describe types of industrial measurements, sensors and devices.
2	Apply basic electrical circuit theorems.
3	Design and analyse common types of analogue and digital circuits.
4	Report on observations made on electronic circuits.

Indicative Module Content

- Application of theorems to analyse circuits. - Techniques for measuring physical parameters. - Design of basic sensor circuits. - Signal rectification and associated circuits. - Characteristics of: op amps, diodes and logic gates. - Flip flops and counters. - Numbering systems. - DAC/ADC conversion.

Module Delivery

This is a lecture based course supplemented with tutorial sessions, laboratory exercises and directed study.

Indicative Student Workload	Full Time	Part Time
Contact Hours	36	36
Non-Contact Hours	114	114
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
Actual Placement hours for professional, statutory or regulatory body		

Module Ref:	EN2511 v4

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	30%	Outcomes Assessed:	4
Description:	A report on a practical laboratory-based investigation.				

Component 2

Type:	Examination	Weighting:	70%	Outcomes Assessed:	1, 2, 3
Description:	Online quiz assessments.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

To pass the module, you must achieve at least a 40% weighted average mark in the exam and coursework. In addition you need to achieve at least 35% in both the individual exam and coursework components.

Module Grade	Minimum Requirements to achieve Module Grade:
A	>70%
B	60-69%
C	50-59%
D	40-49%
E	35-39%
F	0-34%
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

ADDITIONAL NOTES

An Indicative Bibliography will normally reference the latest edition of a text. In some cases, older editions are equally useful for students and therefore, those are the editions that may be stocked.

INDICATIVE BIBLIOGRAPHY

1	JACOB, J.M., 1988. Industrial Control Electronics, Applications and Design. Englewood Cliffs, NJ : Prentice Hall.
2	BEARDS, P., 2002. Analog and Digital Electronics. 2nd ed. Upper Saddle River, NJ: Prentice Hall.
3	BIRD, J.O., 2017. Electrical Circuit Theory and Technology. 6th ed. Abingdon: Routledge.