

Module Outline	Part 1- as validated
-----------------------	-----------------------------

1.	Title	Electronic Engineering Applications
2.	Level *	6
3.	Credits	20
4.	Indicative Student Study Hours	36 hours lectures 164 hours self-directed learning
5.	Core (must take and pass), Compulsory (must take) or Optional	Optional

*** Foundation Level=3 Degree Year 1 = 4 Degree Year 2 = 5 Degree Year 3 = 6
PG (Masters) = 7**

5. Brief Description of Module (purpose, principal aims and objectives)
--

This module extends previous knowledge of electronic principles to the pragmatic application of electronics in industrial, commercial and human-machine interface devices. It explores the circuit topologies and technologies required to make fit for purpose devices to fulfil a wide range of industrial, commercial and scientific applications. The use of simulation software such as Matlab or Simulink is to be encouraged.

The module will also consider the industrial applications of AC and DC electrical machines and drives. Central to this will be an investigation into machine characteristics such as starting and braking, loading conditions, ratings, and their control.

Module 07H: Electronic Engineering Applications
--

Learning Outcomes - On successful completion of this module a student will be able to:

	Subject Specific Learning Outcomes
1	Analyse the performance of an electric machine and determine its characteristics through simulation software.
2	Utilise circuit analysis to solve problems in electrical networks.
3	Critically evaluate the effects of AC and DC machines on the operation and performance of an industrial control system.
	Generic Learning Outcomes

4	Demonstrate the ability to evaluate a subject through simulation.
5	Understand the applications of simulation software.

7. Assessment

Pass on aggregate or Pass all components

(modules can only be pass all components if this is a PSRB requirement)

Pass on aggregates

Summary of Assessment Plan

	Type	% Weighting	Anonymous Yes / No	Word Count/ Exam Length	Learning Outcomes Coverage	Comments
--	------	-------------	--------------------	-------------------------	----------------------------	----------

Note: Formative assessments are available during booked tutorial sessions.

1.	Practical	50%	Yes	1500 words	LO 4, 5	
2.	Case study	50%	Yes	2000 words	LO 1-3	

Further Details of Assessment Proposals

Give brief explanation of each assessment activity listed

- Utilise appropriate simulation software to investigate electrical machines and their characteristics as well as solving problems in typical industrial networks.
- Appraise the effectiveness and performance of AC and DC machines through a case study approach
- Formative Assessment:

Formative assessments provide you with preliminary guidance, feedback, and feedforward on your proposed submissions. You should aim to book tutorial sessions and send your lecturers any work or areas of concern ahead of the session. This ensures you receive the best guidance possible during your session. Please note, the quality of work sent across will directly influence the quality of feedback received, so ensure the work is detailed and in context.

In addition to tutorial sessions, you will also participate in in-class exercises which constitute part of the formative assessments. These exercises are designed to reinforce the module content and provide immediate feedback on your understanding.

8. Summary of Pre and / or Co Requisite Requirements

Not applicable

9. For use on following programmes

BEng Engineering (Electrical)