

## Module specification

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*Refer to the module guidance notes for completion of each section of the specification.*

Module code	ENG448
Module title	Electronics B
Level	4
Credit value	10
Faculty	FAST
Module Leader	Mr A Sharp
HECoS Code	100165
Cost Code	GAME

### Programmes in which module to be offered

Programme title	Is the module core or option for this programme
HNC Electrical & Electronic Technology	Optional

### Pre-requisites

*None*

### Breakdown of module hours

Learning and teaching hours	30 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
<b>Total active learning and teaching hours</b>	<b>30 hrs</b>

Placement / work based learning	0 hrs
Guided independent study	70 hrs
<b>Module duration (total hours)</b>	100 hrs

<b>For office use only</b>	
Initial approval date	August 2016
With effect from date	September 2021
Date and details of revision	6 July 2021, revalidated
Version number	Version 2

## Module aims

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To develop knowledge and understanding of feedback on circuit behaviour and its applications. Investigate the application of positive feedback in oscillator circuits.

## Module Learning Outcomes - at the end of this module, students will be able to:

1	Determine the effects of feedback on circuit behaviour and design circuits that implement the use of feedback
2	Evaluate circuit performance using calculations, simulation and practical testing (depending upon local requirements)
3	Design and build different types of oscillator for differing applications

## Assessment

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Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Assessment is 100% in-course.

Assessment One: Outcomes 1 and 2 would be assessed using an in-class test based on a knowledge obtained in the course of studying the effects of feedback on circuit behaviour (1hr).

Assessment Two: Outcomes 2 and 3 would be assessed by the student producing a short reports based on practical exercises (1000 words).

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1, 2	In Class test	50%
2	2, 3	Practical	50%

## Derogations

*None*

## Learning and Teaching Strategies

The module will be presented to students through a specified series of lectures assisted by notes via VLE platform. Lectures will deliver key concepts, ideas, theories and examples. Investigation and guided practical activity will assist to achieve learning outcomes. Also learners will become familiar with the current software packages and implement use of same.

## Indicative Syllabus Outline

Effects of feedback on circuit behaviour.

Analysis of design solutions.

Circuit design, including feedback systems, and testing.

Use of software packages for circuit simulation.

## Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

### Essential Reads

Hughes, E. (2016) Electrical and Electronic Technology. 12<sup>th</sup> ed. Pearson.

### Other indicative reading

## Employability skills – the Glyndwr Graduate

Each module and programme is designed to cover core Glyndwr Graduate Attributes with the aim that each Graduate will leave Glyndwr having achieved key employability skills as

part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas. [Click here to read more about the Glyndwr Graduate attributes](#)

**Core Attributes**

Engaged  
Creative

**Key Attitudes**

Curiosity  
Confidence  
Adaptability

**Practical Skillsets**

Digital Fluency  
Critical Thinking  
Communication