Module specification

When printed this becomes an uncontrolled document. Please access the Module Directory for the most up to date version by clicking on the following link: Module directory

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

Module code	ENG447
Module title	Electronics A
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
Total active learning and teaching hours	**30** hrs
Placement / work based learning	0 hrs
Guided independent study	70 hrs
Module duration (total hours)	100 hrs

For office use only	
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

To develop knowledge and understanding of analogue electronics enabling signals, noise and amplification.

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

1	Define the principles of circuit operation for a range of circuits, including discrete-component and integrated-circuit amplifiers
2	Analyse the operation of a sample of practical circuits, including the effects of noise, feedback and non-linearity
3	Evaluate circuit performance using calculations, simulation and practical testing (depending upon local requirements).

Assessment

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 analogue electronics (1hr)

Assessment Two: Outcomes 3 would be assessed using a short report produced by student based on software simulation and practical exercises (1000 words).

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

Sources of signal and noise.

Design parameters of different amplifier types; Class A, AB, B & C.

Modes of operation: Common Base, Common Emitter, Common Collector, and FET equivalents.

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. 12th ed. Pearson.

Other indicative reading

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr 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