

MODULE CODE: ACDA4009
TITLE: Signals and Systems
DATED: 15/08/2018
LEVEL: 4
CREDITS: 10
JACS CODE: H610

AIM(S)

- To develop the student's knowledge of signals both analogue and digital;
- To develop a knowledge of point to point communication systems both digital and analogue;
- To understand the need for and implementation of simple signal conditioning in analogue circuits;
- To understand the differences between point to point and multipoint communications and protocols.

LEARNING OUTCOMES

Upon the successful completion of this module, the student should be able to:

- Ability to recognise, understand and evaluate different signal types and protocols;
- Ability to define and implement a simple point to point signal mechanism suitable for a predetermined task

INDICATIVE CONTENT

- Analogue signals and simple conditioning.
- Digital signal protocols for point to point communications.
- Digital signal protocols for multipoint communications.
- Simple hardware transmission systems.
- Differential hardware transmission systems.

LEARNING AND TEACHING STRATEGY

The study time for the module is divided as follows:

Activity type	Hours	Percentage
Scheduled learning	24	24%
Independent learning	76	76%
Placement learning	0	0%
TOTAL	100	100%

ASSESSMENT

Assessment Component 1

☒ Written exam ☐ Coursework ☐ Practical

Mode of assessment	Volume	Weighting
Exam	2 hours	100%

Assessment Summary

Activity type	Percentage
Written exam	100%
Coursework	0
Practical	0
TOTAL	100%

READING LIST

Module Code	ACDA4009	
Module Title	Signals and Systems	
Classification	Reading List entry	Electronic*
Essential	Haykin, Simon S; Moher, Michael (2006) - Introduction to analog and digital communications, Wiley	☐
Further	M. Vetterli, J. Kovacevic and V. Goyal, (2014) Foundations of signal processing, Cambridge University Press	☒
Further	Pathan, Al-Sakib Khan; Khan, Shafiullah; Alrajeh, Nabil Ali (2016) - Wireless sensor networks: current status and future trends, CRC Press	☒
Further	Journals IEEE Xplore ACM Digital Library	☒