

Module Code	TF-3303		
Module Title	Introduction to Communication Systems		
Degree/Diploma	Bachelor of Engineering (Information Communication Systems)		
Type of Module	Major Option		
Modular Credits	4	Total student Workload	8 hours/week
		Contact hours	4 hours/week
Prerequisite	None		
Anti-requisite	None		
Aims			
The aim of the module is to introduce students the basic blocks of communication systems by considering the process at the transmitter, effect of transmission channel and the process at the receiver.			
Learning Outcomes			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	30%	- comprehend the principles of modern communication systems - relate the principles to the techniques used in modern communication systems	
Middle order :	40%	- provide tools which allow students to analyse communication systems - describe problems during the troubleshooting process of modern communication systems	
Higher order:	30%	- assess and perform various aspects of communication systems design - work independently and cooperatively during practical laboratory classes	
Module Contents			
<ul style="list-style-type: none"> – Communication system concepts, Amplitude modulation: Single side-band (SSB), Double side-band large carrier (DSB-LC), Double side-band-suppressed carrier (DSB-SC), Vestigial side-band (VSB) – AM modulators, AM demodulators, Super heterodyne receiver – Frequency modulation, generation detection, FM modulators, FM demodulators, Frequency division multiplexing (FDM) – Phase modulation, Pulse amplitude modulation (PAM), Pulse width modulation (PWM), Pulse position modulation (PPM), Pulse code modulation (PCM), Time-division multiplexing (TDM) – Sampling theorem, spectral analysis, bandwidth 			
Assessment	Formative assessment	Monthly online multiple choice questions will be used to test and to give feedback for their learning	
	Summative assessment	Examination: 50% Coursework: 50% - 2 class tests (10% each) - 2 group laboratory assignments (15% each)	