1.	Title of the course	Signals and Systems
2.	Course number	EE205L
3.	Structure of credits	3-1-0-4
4.	Offered to	UG
5.	New course/modification to	Modification To EE2103/8
6.	To be offered by	Department of Electrical Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	**Course Objective(s):** To introduce various mathematical tools necessary for the analysis and characterizations of signals and systems.	
10.	**Course Content:** Introduction: classification of signals and systems, elementary operations on the signals, basic properties of systems such as casuality and linearity; Linear time-invariant systems: continuous-time linear time-invariant (LTI) system, discrete-time LTI system, properties of LTI systems, system representation through linear constant coefficient differential and difference equations; Fourier series: representation of continuous-time periodic signals, convergence and properties of the Fourier series, frequency response of LTI systems; Fourier transform: representation of aperiodic signals, properties of the continuous-time Fourier transform; Laplace transform: introduction to Laplace transform and region of convergence, properties of the Laplace transform, inverse Laplace transform, analysis of LTI systems using Laplace transform, the unilateral Laplace transform; Sampling theorem and its implications.	
11.	**Textbook(s):** 1. Oppenheim A V, Willsky A S and Nawab S H, *Signals and Systems*, Prentice Hall (2003).	
12.	**Reference(s):** 1. Lathi B P, *Principles of Linear Systems and Signals*, Oxford University Press (2009). 2. Haykin S and Veen B V, *Signals and Systems*, Signals and Systems (2007).	