

Khentawas, Farrukh Nagar, Gurugram, Haryana Approved by: All India Council for Technical Education (AICTE), New Delhi Affiliated to: Gurugram University, Gurugram

# DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING ACADEMIC YEAR 2023-24 SEMESTER VIII

#### **SATELLITE COMMUNICATION (PCC-ECE-403-G)**

Course Outcome (CO)	Details of Course Outcomes		
(CO1)	Visualize the architecture of satellite systems as a means of high speed, high range communication system.		
(CO2)	State various aspects related to satellite systems such as orbital equations, sub-systems in a satellite, link budget, modulation and multiple access schemes.		
(CO3)	Solve numerical problems related to orbital motion and design of link budget for the given parameters and conditions.		

#### **MICROWAVE THEORY AND TECHNIQUES (PCC-ECE-404-G)**

Course Outcome (CO)	Details of Course Outcomes		
(CO1)	Explain different types of waveguides and their respective modes of propagation.		
(CO2)	Analyze typical microwave networks using impedance, admittance, transmission and scattering matrix representations.		
(CO3)	Explain working of microwave passive circuits such as isolator, circulator, Directional couplers, attenuators etc.		
(CO4)	Describe and explain working of microwave tubes and solid state devices.		

## WIRELESS & SATELLITE COMMUNICATION LAB (LC-ECE-406-G)

Course Outcome (CO)	Details of Course Outcomes
(CO1)	To Establish connection between earth stations and satellite with different uplink and downlink frequencies.
(CO2)	To understand transfer of audio and video signal through satellite and transmission of telemetry data.
(CO3)	To find out the delay of signal in satellite links.
(CO4)	To analyze and understand the radiation pattern of Yagi Uda & Folded dipole, Circular & Triangular Patch antenna.
(CO5)	To analyze and understand FHSS Modulation & demodulation, DSSS and CDMA Technology.

## **BASICS OF MACHINE LEARNING (PCC-CSE-402G)**

Course Outcome (CO)	Details of Course Outcomes		
(CO1)	Understand fundamental issues and challenges of supervised and unsupervised learning techniques.		
(CO2)	Extract features that can be used for a particular machine learning approach		
(CO3)	To compare and contrast pros and cons of various machine learning techniques and to get an insight of when to apply a particular machine learning approach.		
(CO4)	To mathematically analyse various machine learning approaches and paradigms.		

### **BIG DATA ANALYTICS (PCC-CSE-404G)**

Course Outcome (CO)	Details of Course Outcomes		
(CO1)	For a given query Describe the Big Data landscape including examples of real world big data problems including the three key sources of Big Data: people, organizations, and sensor.		
(CO2)	For a given specification, Recognize different data elements in your own work and in everyday life problems		
(CO3)	For a given specification select a data model to suit the characteristics of your data		
(CO4)	For a given problem one will be able to Retrieve data from example database and big data management systems and identify when a big data problem needs data integration		
(CO5)	For a given problem one will be able to design an approach to leverage data using the steps in the machine learning process and		

apply them to explore and prepare data for modelling.

# **BIG DATA ANALYTICS LAB (LC-CSE-410G)**

Course Outcome (CO)	Details of Course Outcomes		
(CO1)	For a given query Describe the Big Data landscape including examples of real world big data problems including the three key sources of Big Data: people, organizations, and sensor.		
(CO2)	For a given specification, Recognize different data elements in your own work and in everyday life problems		
(CO3)	For a given specification select a data model to suit the characteristics of your data		
(CO4)	For a given problem one will be able to Retrieve data from example database and big data management systems and identify when a big data problem needs data integration		
(CO5)	For a given problem one will be able to design an approach to leverage data using the steps in the machine learning process and apply them to explore and prepare data for modelling.		