KRISHNASAMY
College of
ENGINEERING & TECHNOLOGY
Approved by AICTE & Affiliated to Anna University
Anand Nagar, Nellikuppam Main Road, S. Kumarapuram, Cuddalore - 607 109, Tamil Nadu.
☎ (04142) 285 601 - 604 www.kcet.in info@kcet.in

DEPARTMENT OF ECE

03.01.2024

CIRCULAR

Ref.: KCET/ECE/VAC/CIRCULAR/2023-24/01.

The following Value Added Course will be conducted during the academic year 2023-2024. The course will be conducted from 11.01.2024 & 12.01.24, 18.01.24, 20.01.2024. Students are instructed to register their names in the course allotted to them.

Note: Students are instructed to attend the program without fail.

S.No.	Course Code	Name of the Course	Year	No. of Period	Course Coordinator
1	EC-VAC2301	RF SYSTEM DESIGN	IV	30	Er.M.DEVANANTHAN AP-ECE
2	EC-VAC2302	DIGITAL COMMUNICATION	III	30	Er.V.KOKILA,AP-ECE

8/1/24
Vice-Principal

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02/01/24
HOD/ECE

3/1/24
Principal

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Class In charge

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SYLLABUS

Subject Code/ Subject Name: EC-VAC2302 - **DIGITAL COMMUNICATION Duration:** 30 Hours

OBJECTIVES:

- To know the principles of sampling & quantization
- To study the various waveform coding schemes
- To learn the various baseband transmission schemes
- To understand the various Band pass signaling schemes
- To know the fundamentals of channel coding

MODULE I SAMPLING & QUANTIZATION 6

Low pass sampling – Aliasing- Signal Reconstruction-Quantization - Uniform & non-uniform quantization - quantization noise - Logarithmic Commanding of speech signal- PCM - TDM

MODULE II WAVEFORM CODING 6

Prediction filtering and DPCM - Delta Modulation - ADPCM & ADM principles-Linear Predictive Coding.

MODULE III BASEBAND TRANSMISSION 6

Properties of Line codes- Power Spectral Density of Unipolar / Polar RZ & NRZ – Bipolar NRZ - Manchester- ISI – Nyquist criterion for distortion less transmission.

MODULE IV DIGITAL MODULATION SCHEME 6

Geometric Representation of signals - Generation, detection, PSD & BER of Coherent BPSK, BFSK & QPSK - QAM - Carrier Synchronization - structure of Non-coherent Receivers -

MODULE ERROR CONTROL CODING 6

Channel coding theorem - Linear Block codes - Hamming codes - Cyclic codes - Convolutional codes - Vitterbi Decoder

TOTAL:30 HOURS

COURSE OUTCOMES:

Discuss the application of electronics in diagnostic and therapeutic area.
Measure biochemical and various physiological information.
Describe the working of units which will help to restore normal functioning

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