DEPARTMENT OF ECE

20.11.2018

CIRCULAR

Ref.: KCET/ECE/VAC/CIRCULAR/2018-19/01.

The following Value Added Course will be conducted during the academic year 2018-2019. The course will be conducted from 10.12.2018 to 14.12.2018. Students are instructed to register their names in the course allotted to them.

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

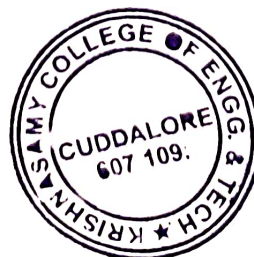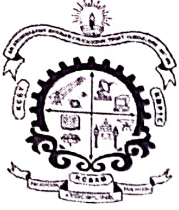| S.No.	Course Code	Name of the Course	Year	No. of Period	Course Coordinator
1	EC-VAC1801	Speech Processing	IV	30	Er.R.Ravi,AP/ECE
2	EC-VAC1802	Application of audio processing	III	30	Er.S.Nandhini,AP-ECE Devi

HOD/ECE 20/11/12

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Class Room

Class In charge

Department File

SYLLABUS

Subject Code/ Subject Name: EC-VAC1802- Application of audio processing   **Duration:** 30 Hours

Objectives:
- Speech signal representations.
- Models for speech production system.
- Models for speech perception system.
- Fundamentals of speech coding.

Module 1:   6

Speech Fundamentals: Articulatory Phonetics – Production and Classification of Speech Sounds; Acoustic Phonetics – acoustics of speech production.

Module 2:   6
Features, Feature Extraction and Pattern Comparison Techniques: Speech distortion measures – mathematical and perceptual – Log Spectral Distance, Cepstral Distances, Weighted Cepstral Distances and Filtering.

Module 3:   6

Hidden Markov Models: Markov Processes, HMMs – Evaluation, Optimal State Sequence – Viterbi Search, Baum-Welch Parameter Re-estimation, Implementation issues.

Module 4:   6

Large Vocabulary Continuous Speech Recognition: Architecture of a large vocabulary continuous speech recognition system – acoustics and language models – n-grams, context dependent sub-word units

Module 5:   6
Text-to-Speech Synthesis: Concatenative and waveform synthesis methods, subword units for TTS, intelligibility and naturalness – role of prosody, Applications and present status.

Duration: 30 Hours

Course Outcomes: At the end of the course the student will be able to
CO1: Understand production of speech.
CO2: Analyze time domain models for speech signals.
CO3: Analyze linear predictive coding techniques.

HoD/ECE