SYLLABUS

SEMESTER- 7

Sound Recording & Sound Design

SP.PAPER-6

Audio Measurements

Credits-3

L	T	P
3	0	10

1. Measuring scales

1.1 Linear and Logarithmic scales.

1.2 Peak, Average, and RMS values of audio signal.

1.3 Decibel scales relating to electrical and acoustic signal levels.

1.4 Different decibel scales dBm, dBu, dBv, dBV,dBW and dB SPL.

1.5 Volume, level and gain.

2. Parameters of Measurement

2.1 Frequency response, Frequency range, power bandwidth.

2.2 Input and output Impedance, impedance matching.

2.3 Use of Noise in measurements, White noise, Pink noise and noise shaping.

2.4 Harmonic distortion measurements and specifications.

2.5 Intermodulation distortion and measuring IM, Cross talk.

3. Measuring Instruments and testing

3.1 Volt - Ohm meter, Sine wave oscillator, Oscilloscope, Phase tester, SPL meter, impedance meter, polarity test set.

3.2 The real time analyzer, Loudness meter.

3.3 Fast Fourier Transform (FFT) measurements.
Dual-channel FFT.

3.4 Time delay spectrometry (TDS)

3.5 Impulse Response tests.

4. Sound system design.

4.1 Public address system design.

4.2 Uniform distribution of acoustic power over specified area

4.3 Intelligibility criteria and reliability.

4.4 Studio design

4.5 Studio monitoring design.

5. Protection of hearing system

5.1 Hearing damage.

5.2 Noise pollution and control.

5.3 Protecting ears from hearing impairment

5.4 Audio measurements for Environmental and town planning

5.5 Applications of audio measurements.

Reference book :

1.Handbook for Sound Engineers, Editor Glen M Ballou, Fourth Edition, Focal Press

2. Sound Reinforcement Handbook, Gary Davis and Ralph Jones, Second Edition