SCHEME OF COURSE WORK

Course Title	: DIGITAL SIGNAL PROCESSING LAB					
Course Code	:15EC2108	LPC	0 3 2			
Program:	: M.Tech					
Specialization:	: Communication Engineering & Signal Processing	ng				
Semester	I: I					
Prerequisites	: Digital Signal Processing Theory, C and MATLAB Programming.					

Course Outcomes (COs): At the end of the course the student will be able to

1	Develop and Implement DSP algorithms in software using a computer language such as
	C with TMS320C6713 floating point Processor
2	Develop various DSP Algorithms using MATLAB Software package.
3	Analyze and Observe Magnitude and phase characteristics
	(Frequency response Characteristics) of digital IIR Butterworth, Chebyshev filters.
4	Analyze and Observe Magnitude and phase characteristics
	(Frequency response Characteristics) of digital FIR filters using window techniques.
5	Design and Analyze Digital Filters using FDA Tool.

Course Outcomes versus Program Outcomes:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1		S	S	M	S						S
CO ₂		S	S	M	S						S
CO3		S	S	S	S						S
CO4		S	S	S	S						S
CO5		S	S	S	S						S

S - Strongly correlated, M - Moderately correlated, Blank - No correlation

Assessment Methods:	Day to Day Analysis/Lab internal
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Introduction to Lab course & Lab Instructions CO1 Discuss challenging questions related to the lab course & Lab Instructions CO1 Discuss challenging questions related to the lab course & Lab Instructions Stimulate Day to Day Discussions Analysis/Lab internal-1 DSP Processor Stimulate Day to Day Discussions/ Hands on exposure CO2 Circular convolution between two sequences. CO2 Circular convolution CO3	Week	Topic /Contents	Course	Sample questions	Teaching-	Assessment		
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12	To perform FFT on a sequence using the following methods. (a) Decimation in time (b) Decimation in frequency.	CO3	To perform FFT on a sequence using the following methods. (a) Decimation in time (b) Decimation in frequency.	Stimulate Discussions/ Hands on exposure	Day to Day Analysis/Lab internal-II			
13	To perform IDFT on a transformed sequence using DFT.	CO4	To perform IDFT on a transformed sequence using DFT.	Stimulate Discussions/ Hands on exposure	Day to Day Analysis/Lab internal-II			
14	Design an FIR filter using windowing techniques.	CO5	Design an FIR filter using windowing techniques.	Stimulate Discussions/ Hands on exposure	Day to Day Analysis/Lab internal-II			
15	Design an IIR filter using bilinear transformation method	CO5	Design an IIR filter using bilinear transformation method	Stimulate Discussions/ Hands on exposure	Day to Day Analysis/Lab internal-II			
16	Revision							
17	Internal-II							
18	End Practical Exam							