



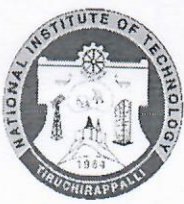
NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

COURSE PLAN – PART I			
Name of the programme and specialization	B-TECH		
Course Title	DIGITAL SIGNAL PROCESSING LABORATORY		
Course Code	ECLR15	No. of Credits	2
Course Code of Pre-requisite subject(s)			
Session	July 2019	Section (if, applicable)	A
Name of Faculty	Dr.G. Gandhimathi	Department	ECE
Official Email	ggandhimathi12@gmail.com	Telephone No.	9790035798
Name of Course Coordinator(s) (if, applicable)			
Official E-mail		Telephone No.	
Course Type (please tick appropriately)	<input type="checkbox"/> Core course	<input type="checkbox"/> Elective course	ELR
Syllabus (approved in BoS)			
<p>MATLAB tool based simulation experiments</p> <ol style="list-style-type: none"> 1. Realization of correlation of two discrete signals 2. Realization of convolution 3. FIR filter design 4. IIR filter design 5. DFT implementation 6. SNR and Power spectral density estimation of signals <p>TMS320C5416 Digital Signal Processor kit based Experiments</p> <ol style="list-style-type: none"> 1. Study of various addressing modes and arithmetic sequence generation 2. Convolution using MAC, MACD and MACP instructions. Convolution using overlap add and overlap save method 3. Wave pattern generation 4. FIR filter implementation 5. DFT implementation using FFT radix-2 algorithm 6. Serial interface and data acquisition 			
COURSE OBJECTIVES			



2	Week 2	Realization of convolution	Hands on experiment
3	Week 3	FIR filter design	Hands on experiment
4	Week 4	IIR filter design	Hands on experiment
5	Week 5	DFT implementation	Hands on experiment
6	Week 6	SNR and Power spectral density estimation of signals	Hands on experiment
7	Week 7	TMS320C5416 Digital Signal Processor kit based Experiments Study of various addressing modes and arithmetic sequence generation	Hands on experiment
8	Week 8	Convolution using MAC, MACD and MACP instructions. Convolution using overlap add and overlap save method	Hands on experiment
9	Week 9	Wave pattern generation	Hands on experiment
10	Week 10	FIR filter implementation	Hands on experiment
11	Week 11	DFT implementation using FFT radix-2 algorithm	Hands on experiment
12	Week 12	Serial interface and data acquisition	Hands on experiment



assessment and shall be awarded 'V' grade.

ACADEMIC DISHONESTY & PLAGIARISM

- Possessing a mobile phone, carrying bits of paper, talking to other students, copying from others during an assessment will be treated as punishable dishonesty.
- Zero mark to be awarded for the offenders. For copying from another student, both students get the same penalty of zero mark.
- The departmental disciplinary committee including the course faculty member, PAC chairperson and the HoD, as members shall verify the facts of the malpractice and award the punishment if the student is found guilty. The report shall be submitted to the Academic office.
- The above policy against academic dishonesty shall be applicable for all the programmes.

ADDITIONAL INFORMATION, IF ANY

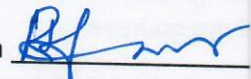
FOR APPROVAL

Course Faculty



(G. Ganeshimathi)

CC- Chairperson



(Dr. R.K. Jeyachandran)

HOD

