DON BOSCO INSTITUTE OF TECHONOLGY, KURLA, MUMBAI

DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

	COURSE OUTCOMES						
				CAY- (Even semester, 2018-19)			
Course Name:		Mat	hs IV				
Course Code		EC	2401				
Faculty Name:		PIN	КY				
Year	2	Sem	IV				
CO Number				Course Outcome			
ECC401.1				lues and Eigen vectors for a given square matrix (ii) Define Vector spaces (iii) Define Karl Pearson's correlation coefficient			
ECC401.2	Students will be able to (i) Infer properties of Eigen values and Eigen vectors (ii) Show if a given set is a vector space or not (iii) Calculate conditional Probabilities using Bayes' theorem (iv) Obtain pdf and cdf of discrete and continuous random variables (including special discrete – Binomial and Poisson and special continuous – normal) (v) Calculate various probabilities of random variables following Binomial Poisson and Normal distributions (vi) Karl-Pearson's Coefficient of Correlation and Spearman's Rank Correlation and regression lines						
ECC401.3		Students will be able to (i) Construct diagonal matrices using the concept of similarity (ii) Build functions of square matrices (iii) Identify orthogonal vectors and obtain orthonormal basis using Gram-Schmidt process					
ECC401.4	Students will be able to 1. Evaluate integrals using the different Cauchy's theorems (Integral theorem, Residue theorem) 2. Obtain Taylor's and Laurent's series 3. Obtain extremals of a given integral using the theory of Calculus of variations 4. Obtain extremals of a integral involving higher order derivative using Rayleigh's Method.						
ECC401.5	Students will be able to 1. Use Bayes' theorem to obtain conditional probabilities 2. Obtain MGF and hence obtain the mean and variance (up to first 4 moments) of a random variable 3. Obtain probabilities using correct interpretation of Binomial distribution, Poisson and normal approximations to binomial distribution and also Binomial approximation to normal distribution						
ECC401.6				s of a given integral under some constraints using the theory of Calculus of variations (Isoperimetric lues for normal distributions			

Course Name:	Electror	ic devices	and Circuits - II		
Course Code	ECC402				
Faculty Name:	La	kshmi Vir	nayakvitthal		
Year	2	Sem	IV		
CO Number				Course Outcome	
ECC402.1	Students wi and Oscillat		o describe the basic p	rinciple and classify various semiconductor devices like FET, Large signal amplifiers, feedback amplifiers	
ECC402.2	Students wi	ll be able t	o explain the operatio	on and discuss various types of semiconductor devices with references to electronics circuits.	
ECC402.3	Students will be able to derive the expressions for various performance measures of small signal and large signal amplifers and oscillators				
ECC402.4	Students will be able to analyze and relate circuit parameters with performance parameters for single and multistage amplifier and oscillator circuits				
ECC402.5	Students wi	ll be able t	o evaluate and select	suitable components to obtain proper performance of Amplifier circuits for the given specification	
ECC402.6	Students wi	ll be able t	o design amplifier an	d oscillator circuit for given specification and application	

Course Name:	Lin	ear integ	rated Circuits			
Course Code		ECO	C 403			
Faculty Name:		DR M.	ANDE			
Year	2	Sem	IV			
CO Number				Course Outcome		
ECC403.1	Students wi	Students will be able to define functionality of various Integrated circuits.				
ECC403.2	Students wi	Students will be able to explain working principles of various integrated circuits and their applications.				
		Students will be able to derive expressions for performance parameters of various circuits like Inverting Amplifier, Non-Inverting Amplifier, adder, subtract, Ton, Toff, frequency and so on.				
ECC403.4	Students wi	Students will be able to analyze and relate the performance of various integrated circuits in terms of circuit parameters.				
ECC403.5	Students wi	Students will be able to evaluate, compare and select the optimized circuits for the given application.				
ECC403.6	Students wi	ill be able	to design linear integr	ated circuit for given application and specifications.		

Course Code		ECO	3404			
Faculty Name:		Jithin	Isaac			
Year	2	Sem	IV			
CO Number				Course Outcome		
ECC404.1	Students wi	ill be able	to learn the mathemat	ical description and representation of continuous and discrete time signals and systems.		
ECC404.2	Students wi	Students will be able to interpret & classify signals & systems based on their different properties.				
ECC404.3	Students will be able to apply the Laplace transform and Z- transform to continuous-time and discrete-time signals and determine the response of LTI system using convolution					
ECC404.4	Students wi	Students will be able to Analyse the spectral characteristics of continuous-time periodic and aperiodic signals using Fourier analysis.				
ECC404.5	Students will be able to compare & evaluate the different signal processing algorithms being used for various signal processing applications					
ECC404.6	Students wi	ill be able	to realize and design i	recursive and non recursive systems in different forms.		

Course Name:

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Course Name:		PC	DM				
Course Code	ECC405						
Faculty Name:		Gejo (George				
Year	2	Sem	IV				
CO Number				Course Outcome			
ECC405.1	The student communica			similate information regarding the different types of analog and pulse modulation-demodulation			
ECC405.2	The students will be able to discuss and summarize different types of communication media and the modulation and demodulation techniques used.						
ECC405.3	The student	The students will be able to apply their knowledge in obtaining the different performance parameters of a system					
ECC405.4	The students will be able to analyze the fundamental communication systems and relate the effect each block has on the performance of the system.						
ECC405.5	The student applications		ble to evaluate & com	pare the different types of analog & pulse communication systems and select suitable systems to build their			
ECC405.6	The student	s will desi	gn an application orie	nted mini-project.			

Course Name:	Electronic devices and Circuits - II Laboratory						
Course Code	ECL401						
Faculty Name:	La	kshmi Vi	nayakvitthal				
Year	2	Sem	IV	-			
CO Number				Course Outcome			
ECL401.1	Breadboard Students wi	Students will be able to understand biasing circuits and/ obtain the transfer and output characteristics of MOSFET Circuits and large signal amplifiers on Breadboard/Software. Students will be able to analyse Multistage amplifiers and Feedback amplifiers and obtain the frequency response and calculate the performance					
ECL401.2	parameter b	parameter both theoretically and practically using Breadboard/Software					
ECL401.3	Students wi	Students will be able to obtain the resonant frequency of Oscillator circuits theoretically and practically using Breadboard/Software					
ECL401.4	Students wi	ll be able	to design miniprojects	based on applications of amplifiers and oscillator based circuits for the given specification			

Course Name:			Communication (Laboratory				
Course Code		ECI	404				
Faculty Name:	Gejo George						
Year	2	Sem	IV				
CO Number				Course Outcome			
ECL404.1		The students will be able to experimentally perform and describe the different types of analog and pulse modulation techniques and understand the difference between each.					
ECL404.2	The students	The students will be able to experimentally find the different physical parameters of the various modulated signals.					
ECL404.3	The students will be able to experimentally analyze the effect each parameter has on the various types of pulse and analog modulation.						
ECL404.4	Students wi	ll be able	to design and impleme	ent miniprojects based on different modulation and demodulation techniques and build their applications.			

Course Name:		LIC	LAB				
Course Code		ECI	.402				
Faculty Name:	DR MANDE						
Year	2	Sem	IV				
CO Number				Course Outcome			
ECL402.1	The student	s will und	erstand the working o	f various IC , timers and linear integrated circuits			
ECL402.2	The student	The students will be able to identify the particular circuit necessary to perform a particular operation					
ECL402.3	The student	The students will be able to analyze the working of differerent types of circuits					
ECL402.4	The student	he students will be able to evaluate various parameters of the given circuit.					
ECL402.5	The student	s will be a	ble to design the circu	it for a given application			

Course Name:	MICROCONTROLLER AND APPLICATION						
Course Code	ECC601						
Faculty Name:		YOGI	SH G				
Year	3	Sem	VI				
CO Number				Course Outcome			
ETC501.1	Student wil	l know ba	sic features, architectu	re and pin configuration of 8051 and ARM7 microcontroller.			
		Student will be able to demonstrate understanding of memory organization, I/O ports, counter/ timer, interrupts, UART of microcontroller.					
ETC501.3	Student wil	Student will be able to apply knowledge of instruction set to write assembly language program for given logic.					
ETC501.4		Student will be able to interface and program peripheral devices LED, LCD, and seven segment display,Keyboard,ADC and DAC (0808/09),Stepper notor and relay, IR sensor with 8051 and ARM7 microcontroller.					
ETC501.5	Student will	l be able t	o design microcontroll	er based system for various application			

Course Name:		CC	CN .			
Course Code	ECC602					
Faculty Name:		Namita	Agarwal			
Year	3	Sem	VI			
CO Number				Course Outcome		
ECC602.1	Students wi	Students will be able to define and describe the basic concepts of computer networks				
ECC602.2	Students wi networks.	Students will be able to discuss and explain the services provided, protocols used along with the design issues for each of the layers of computer networks.				
ECC602.3	Students will be able to apply various error detection and correction methods along with routing algorithms .					
ECC602.4	Students will be able to compare various protocols,multiple access techniques and routing algorithms used in computer networks.					
ECC602.5	Students wi	ll be able t	o evaluate the perform	nance of a computer network.		
ECC602.6	Students wi	ll be able t	o formulate,design an	d apply subnet masks and addresses to fulfill networking requirements		

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Course Name:		AV	VP			
Course Code		ECO	603			
Faculty Name:		FRE	DAC			
Year	3	Sem	VI			
CO Number				Course Outcome		
ECC603.1	Student wil	l be able to	o define and explain M	faxwell's equations, various antenna parameters, different propagation effects.		
ECC603.2	Student wil	l be able to	o use Maxwell's equat	ions for derivations of various antennas. They will be able to solve problems on antenna fundamentals		
ECC603.3	Student will be able to apply concepts to compare various types of antennas based on the requirements /applications. They will be able to evaluate polarisation, impedance matching effects in antennas.					
ECC603.4	Student will be able to analyse the radiation pattern, beamwidth, directivity, null directions for antenna array, yagi and log periodic antenna					
ECC603.5	Student will be able to evaluate the given specifications to arrive at the appropriate design/circuit considerations of antennas					
ECC603.6	Student will	l be able to	o suggest an appropria	te design method of antenna system for the given specifications		

Course Name:		IPMV					
Course Code	ECC604						
Faculty Name:	Dr. S	atishkun	ar S. Chavan				
Year	3	Sem	VI				
CO Number				Course Outcome			
ECC604.1	Students wi	ll be able 1	o know basics of ima	ge processing with fundamental processes.			
ECC604.2	Students wi	Students will be able to understand fundamental concepts of formation and sampling of image.					
ECC604.3	Students wi	Students will be able to improve the quality of an image in spatial domain as well as in frequency domain.					
ECC604.4	Students will be able to interpret and analyze images in spatial and frequency domain.						
ECC604.5	Students wi	Students will be able to choose appropriate method to reconstruct original image from degraded image.					
ECC604.6	Students wi	ll be able 1	o design methods for	processing images for human interpretation or further processing.			

Course Name:	DIGITAL VLSI ELECTIVE							
Course Code		ECCDI	LO 6021					
Faculty Name:		LAKS	HMI V					
Year	3	Sem	VI					
CO Number				Course Outcome				
ECCDLO 6021.1	Students wi	Students will know describe the fundamental understanding of MOSFET						
ECCDLO 6021.2	Students wi			various design styles , memory and storage circuits, data path designs and system level design issues such as				
ECCDLO 6021.3	Students wi	Students will be able to apply the concept and derive expressions for various performance measure of digital circuits						
ECCDLO 6021.4	Students will be able to analyze the various factors affecting performance measures of digital circuits such as Noise Margins, Propagation delays, power dissipation, and area							
ECCDLO 6021.5	Students wi	tudents will be able to compare and select appropriate digital circuit with suitable configuration for given applications						
ECCDLO 6021.6	Students wi	ll be able	to design various build	ling blocks of VLSI circuits to satisfy given specifications				

Course Name:	RADAR ENGG		ENGG			
Course Code	ECCDLO6022					
Faculty Name:		ASHW	'INI K			
Year	3	Sem	VI			
CO Number				Course Outcome		
	Student will be able to explain the fundamental concept of RADAR. They will be explain the working principle the different types of Radar displays and their application in real time scenario. (PO1)					
ECCDLO 6022.2	Students wi	ll be able (demonstrate an unders	tanding of the factors affecting the radar performance using Radar Range Equation.		
	Students will be able apply concepts of working principles to differentiate between different types of RADARS. Also will be able to demonstrate an understanding of the importance of Matched Filter Receivers in Radars.					
ECCDLO 6022.4	Students will be able analyze cases to identify the suitable measurement methodologies to characterize and verify the performance of radar systems.					
ECCDLO 6022.5	Students will be able to evaluate design constraints for RADAR transmitters & receivers.					
ECCDLO 6022.6	Students wi	ll be able i	o design radar system	s computationally and use modern tools to .		

Course Name:	DATABASE MANAGEMENT SYSTEM							
Course Code		ECCDI	O 6023					
Faculty Name:		JITI	HN I					
Year	3	Sem	VI					
CO Number				Course Outcome				
ECCDLO6023.1	Students wi	ill be able	to understand, define a	and explain the fundamentals of database management systems.				
ECCDLO6023.2	Students wi	ill be able	to understand the conc	ept of Transaction, Concurrency and Recovery Management.				
ECCDLO6023.3	Students wi	tudents will be able to apply and formulate SQL queries to manage the database system.						
ECCDLO6023.4	Students will be able to convert conceptual model to relational model and formulate relational algebra queries							
ECCDLO6023.5	Students wi	tudents will be able to analyze and design a relational database design using the concepts of normalizations.						
ECCDLO6023.6	Students wi	ill be able	to to design the concej	ptual model of database for any real life problem.				

Course Name:	AU	JDIO PR	OCESSING
Course Code		ECCDI	LO 6024
Faculty Name:		PRATI	BHA D
Year	3	Sem	VI

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CO Number		Course Outcome							
ECCDLO 6024.1		dents will be able to define the various terms related to signals and systems as required for audio processing, speech production, and speech cessing and speech analysis.							
ECCDLO 6024.2				epresentation of speech waveforms, properties of speech signal, short time analysis in time and frequency used in speech processing, and their applications.					
ECCDLO 6024.3	Students wi	udents will be able to compute the pitch and formants of a speech signal using different digital signal processing methodologies.							
ECCDLO 6024.4	Students wi	tudents will be able to analyse the different interpretation methods of the short time Fourier transform.							
ECCDLO 6024.5		tudents will be able to justify and compare the different techniques used for digital representation of speech waveforms, techniques used in time omain, frequency domain, and the techniques used in the design of specified vocoders.							
ECCDLO 6024.6				rams for specified vocoders and analysis methods and applications taking into consideration different ired for processing of speech signals.					

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Course Name:	AUDIO PROCESSING LAB						
Course Code	ECLDLO 6024						
Faculty Name:		PRATI	BHA D				
Year	3	Sem	VI				
CO Number				Course Outcome			
ECLDLO 6024.1	Students will be able to read and plot the speech signals using programming languages like Scilab/Matlab/R/Python. (Remembering)						
ECLDLO 6024.2	Students wi	ill be able	to understand program	n construct for speech processing, (Understanding)			
ECLDLO 6024.3	Students wi (Applying)	Students will be able to apply digital signal processing techniques to extract the features of the speech signals in time domain and frequency domain. (Applying)					
ECLDLO 6024.4	Students will be able to analyze the features obtained from the speech signals. (Analyzing)						
ECLDLO 6024.5	Students wi	Students will be able to choose appropriate techniques to extract the features from the speech signals. (Evaluating)					
ECLDLO 6024.6	Students wi	ill be able	to work on a mini proj	ject in the area of speech / audio processing. (Creating)			

Course Name:	MICROCONTROLLER & APPLICATION LAB						
Course Code		ECI	.601				
Faculty Name:		YOGI	SH G				
Year	3	Sem	VI				
CO Number				Course Outcome			
ETC501.1 ETC501.2	Student will	Student will know basic features, architecture and pin configuration of 8051 and ARM7 microcontroller. Student will be able to demonstrate understanding of memory organization, I/O ports, counter/ timer, interrupts, UART of microcontroller.					
ETC501.3	Student will	Student will be able to apply knowledge of instruction set to write assembly language program for given logic.					
ETC501.4		Student will be able to interface and program peripheral devices LED, LCD, and seven segment display, Keyboard, ADC and DAC (0808/09), Stepper notor and relay, IR sensor with 8051 and ARM7 microcontroller.					
ETC501.5	Student will	l be able to	o design microcontroll	er based system for various application			

Course Name:		CCN LAB					
Course Code	ECL602						
Faculty Name:		Namita /	Agarwal				
Year	3	Sem	VI				
CO Number				Course Outcome			
ECL602.1	Students wi	ll be able t	o explain the various	network devices and protocols used at each layer.			
ECL602.2	Students wi	Students will be able to understand and perform various network commands on Linux.					
ECL602.3	Students wi	Students will be able to apply error detection and correction techniques.					
ECL602.4	Students will be able to analyze the traffic flow and protocol frames						
ECL602.5	Students will be able to simulate and evaluate the performance of a computer network.						
ECL602.6	Students wi	ll be able t	o design a computer 1	network as per specific need.			

Course Name:		AWP	LAB				
Course Code		ECI	-603				
Faculty Name:	FF	REDA C, A	ASHWINI K				
Year	3	Sem	VI				
CO Number				Course Outcome			
ECL603.1	Students wi	ll be able	to explain and define	various antenna parameters and also explain propagation effects.			
	Students wi parameters	Students will have basic knowledge and skills related to Antenna system and it's testing methods, they will be able to measure various antenna narameters					
ECL603.2	-						
		Students will be able to apply their theoretical knowledge and demonstrate proficiency to operate various instruments like directional coupler, VNA and software like ANSYS HFSS					
ECL603.3							
	Student wil	Student will be able to analyse radiation pattern and S11 parameters to compare antennas with respect to certain defined antenna parameters					
ECL603.4							
	Students will be able to investigate inorder to assess the need of adaptation for technological change in the field of antennas						
ECL603.5							
ECL603.6	Student wi	ll be able t	o evaluate given spec	ifications to arrive at appropriate theoretical design of antennas and validate through simulation			

Course Name:		IPMV	LAB					
Course Code		ECI	.604					
Faculty Name:		DR SA	FISH C					
Year	3	Sem	VI					
CO Number				Course Outcome				
ECL604.1	Students wi	ill be able i	o understand program	nming constructs for image processing and machine vision.				
ECL604.2	Students wi	Students will be able to read, modify, display and create images.						
ECL604.3	Students wi	Students will be able to improve the subjective quality of images in spatial domain and frerquency domain.						
ECL604.4	Students will be able to analyze and interpret the images for machine vision.							
ECL604.5	Students will be able to choose appropriate filter to remove the noise.							
ECL604.6	Students wi	ill be able i	o design filters for im	age processing and machine vison.				

Course Name:	WN						
Course Code	ETC801						
Faculty Name:		Aparna I	VI. Telgote				
Year	4	Sem	VIII				
CO Number				Course Outcome			
ETC801.1		Student will be able to understand characteristics of communication channel, radio access techniques and multi user detection and specifications of GSM/CDMA technologies.					
ETC801.2	Student wil	l be able to	o compare 2G, 3G and	4G network.			
ETC801.3	Students wi	Students will be able to understand and compare different emerging technologies like Bluetooth, zigbee, Wimax					
ETC801.4	Students will be able to give details of sensor network architecture, traffic related protocols , transmission technology etc						
ETC801.5	Students will be able to calculate capacity of cellular network of given area.						
ETC801.6	Students wi	ll be able	to evaluate link budge	t for GSM, CDMA, WCDMA,HSDPA Technologies.			

Course Name:	SCN						
Course Code	ETC802						
Faculty Name:		GEJ	10 G				
Year	4	Sem	VIII				
CO Number				Course Outcome			
ETC802.1			to define every aspects ion and Network.(Ren	s of satellite communication system like orbital parameters, its mechanics, launching techniquesused in the nembering)			
ETC802.2		Students will be able to explain the basic communication concepts of the Space Segment and Ground Segment used in Satellite Launching Mechanism. (Understanding)					
ETC802.3		Students will be able to apply the knowledge of Satellite Orbits and Links to establish proper Uplink-Downlink to calculate various communication parameters.(Applying)					
ETC802.4	Students will be able to analyze various performance parameters of Satellite communication and network.(Analyzing)						
ETC802.5	Students will be able to compare variousEarth Station technologies andMultiple Access Technique used in Satellite communication system and network. (Evaluation)						
ETC802.6				onstrations and important Satellite Earth Station Equipments, various frequency bands used for eur, Thane. And to write a technical Report on this Field Visit.			

Course Name:	IVC							
Course Code		ETC	2803					
Faculty Name:		APAF	RNAT					
Year	4	Sem	VIII					
CO Number				Course Outcome				
ETC803.1	Students w	Students will be able to define various terms related to the internet communication and voice transfer						
ETC803.2	Students w	Students will be able to discuss the functions of the various protocols in use for internet and voice communication						
ETC803.3	Students w	Students will be able to choose the specific protocols for a given application						
ETC803.4	Students w	Students will be able to analyse different protocols used in internet communication						
ETC803.5	Students w	ill be able	to design various netw	vorks and subnetworks used in internet communication according to specific applications				

Course Name:		Speech P	rocessing				
Course Code		ETE	801				
Faculty Name:		Pratibha	Dumane				
Year	4	Sem	VIII				
CO Number				Course Outcome			
ETE 801.1	Students wi	Students will be able to define the various terms related to speech production, speech processing and speech analysis.					
ETE 801.2				f speech signal, short time analysis in time, frequency and cepstrum domain and explain the various h coding and their applications.			
ETE 801.3	Students wi	Students will be able to compute the pitch and formants of a speech signal using different digital signal processing methodologies.					
ETE 801.4	Students wi vocoders.	Students will be able to compare the different techniques used in frequency domain, cepstral domain and the techniques used in the design of specified vocoders.					
ETE 801.5				grams for specified speech processing and analysis methods and applications taking into consideration ures required for processing of speech signals.			

Course Name:	TNM						
Course Code	ETE802						
Faculty Name:	Poonam Chakraborty						
Year	4 Sem VIII		VIII				
CO Number				Course Outcome			
ETE802.1		The students will be able to define the fundamental principles and technical underlying standards in : Telecommunication, Networking and Informatio Technologies.					
ETE802.2	The student	The students will be able to explain Communications Network Management Systems and their strengths and limitations.					
ETE802.3	The student	The students will be able to model networked informative systems and continuously improve their technological knowledge and communication skills.					
ETE802.4	The students will be able to analyze operation and management of modern data communications networks.						
ETE802.5		The students will be able to compare the way technological change and emerging technologies might alter the assumptions for the underlying architectures systems and management tools.					
ETE802.6	The student	s will be a	ble to propose the des	ign of Network management model based on the case study.			

Course Name:		WN-	LAB					
Course Code	ETL801							
Faculty Name:	POONAM C							
Year	4	4 Sem VIII						
CO Number				Course Outcome				
ETL801.1	Students wi	Students will able to identify various hardware and software components required in the wireless networks.						
ETL801.2	Students wi	Students will able to demonstrate the configuration of WLAN, WPAN using packet Tracer						
ETL801.3	Students wi	Students will able to calculate the Qos parameter of wireless sensor network						
ETL801.4	Students wi	Students will able to apply uplink and downlink budget analysis for GSM, CDMA, WCDMA and HSPA Technologies						
ETL801.5	Students wi	itudents will be able to create wired and wireless scenario using ns2 simulation						
ETL801.6	Students wi	ll be able	to design/write a repo	rt on a practical application on wireless network.				

Course Name:	SCN-LAB						
Course Code	ETL802						
Faculty Name:		Gej	o G				
Year	4	Sem	VIII				
CO Number				Course Outcome			
ETL802.1	Students wi	Students will be able to understand the functions of basic satellite communication system practically.					
ETL802.2	Students will be able to establish satellite communication link between transmitter and receiver with emulator.						
ETL802.3	Students wi	Students will be able to apply the concept of uplink and downlink frequencies in actual environment.					
ETL802.4	Students wi	Students will be able to calculate EIRP, Carrier to Noise Ratio and signal strength of the Satellite Receiver.					
ETL802.5	Students wi	ll be able	to analyze the type of	link for transmission and reception for various modes of communication.			

Course Name:		IVC	LAB					
Course Code		ETI	.803					
Faculty Name:		APAF	NAT					
Year	4	Sem	VIII					
CO Number		Course Outcome						
ETL803.1	Students w	Students will be able to use various softwares required for internet and voice communication.						
ETL803.2	Students w	students will be able to implement LANs using both static and dynamic addressing techniques including subnetting.						
ETL803.3	Students w	tudents will be able to configure various protocols like DHCP, DNS, SSH, Telnet, VoIP.						
ETL803.4	Students w	itudents will be able to demonstrate control congestion in TCP and UDP.						
ETL803.5	Students w	ill be able	to disassemble, troubl	eshoot, upgrade, replace basic components and reassemble servers and client systems.				

Course Name:		TNM	-LAB				
Course Code	ETEL802						
Faculty Name:	Ms Poonam C						
Year	4 Sem VIII						
CO Number				Course Outcome			
ETL 802.1 ETL 802.2	The student	The students will be able to understand the basic tools used for network status and traffic monitoring and management. The students will be able to experiments with basic network status monitoring/routing tools using Linux Tool Line Commands and Packet Sniffer					
ETL802.3	The student	The students will be able to build various network using Packet Tracer / OPNET. They will be able to audit the network using open source tools.					
ETL802.4	The students will be able to analyze operation and management of CACTI, Icinga, Nagios servers and services for various application.						
ETL802.5	The student	The students will be able to implement SNMP Version 3 using packet Tracer and verify SNMP operations.					
ETL802.6	he students IBM NMS.	will be ab	le to select, grade and	propose various commercial Network Management Tools like HPOpenView, OpManager, GFILanguard,			

Course Name:		SP	Lab				
Course Code	ETL 801						
Faculty Name:	Ms Pratibha D						
Year	4 Sem VIII						
CO Number				Course Outcome			
ETL 801.1	Students wi	Students will be able to learn audio file handling using tools like Matlab, PRAAT.					
ETL801.2	Students wi	Students will be able to extract features like energy, zero crossing rate from a speech signal in the time domain.					
ETL801.3	Students wi	Students will be able to extract the pitch information from the spectrum and cepstrum of speech signals.					
ETL802.4	Apply digit	Apply digital signal processing methodologies to solve speech processing problems.					

Course Name:	PROJECT STAGE-II						
Course Code	ETP801						
Faculty Name:	Jithin Isaac						
Year	4 Sem VIII		VIII				
CO Number				Course Outcome			
ETP801.1	Students wi	Students will be able to convert the design into a Product/Model/Prototype and validate the results.					
ETP801.2	Students wi	Students will be able to execute the project plan and monitor progress and maintain deadlines.					
ETP801.3	Students wi	ll be able	to summarize the worl	k in the form of technical documentation following ethical practices.			