

CO – COURSE OUTCOMES

Second Year (Third Semester)	
COURSE : C201	ADVANCED MATHEMATICS
C201.1	Understand the concept of optimizations and solve the related problems
C201.2	Formulate linear programming and solve the problems by appropriate methods.
C201.3	Get idea of Number theory and solve problems by respective methods
C201.4	Equip them familiar with Laplace transforms and solve Initial Value problem and Boundary Value Problem by Laplace transforms.
C201.5	To get exposed to finite differences, interpolation and numerical integration and to find numerical solutions of ordinary differential equations.
COURSE : C202	TECHNICAL COMMUNICATION
C202.1	Students effectively will be able to handle importance of technical communication, Aspects of technical communication, forms of technical communication and identify other common methods of professional communication in their professional life.
C202.2	Basics of grammar, common error in writing and speaking, Study of advanced grammar, editing strategies to achieve appropriate technical style, Introduction to advanced technical communication.
C202.3	linguistic ability will get enhanced by Identifying key principles and delivery techniques of effective public speaking ((Listening, speaking, writing, reading writing)
C202.4	Comprehension of Technical Materials/Texts and Information Design & development- Reading of technical texts, instructions and technical manuals,

C202.5	Note:making.Introductionofdifferentkindsoftechnicaldocuments,Informationcollecti on,factorsaffectinginformationanddocumentdesignStrategiesfororganization,Inform ationdesign
COUR SE : C203	Managerial Economics and Financial Accounting
C203.1	To identify the objectives, nature, scope, role & responsibilities of a manager of a business undertaking
C203.2	To apply the knowledge of demand, demand elasticity & demand forecasting by using statistical techniques
C203.3	To explain the relevance of cost behaviour analysis & costs that are useful for managerial decision making and
C203.4	To differentiate & distinguish price and output decisions in different market structures i.e., perfect, monopoly,
C203.5	To compare & contrast the differences between private & public sector undertakings in their features, objectives.
COUR SE : C204	DIGITAL SYSTEM AND DESIGN
C204.1	Develop the understanding of number system and its application in digital electronics.
C204.2	DevelopmentandanalysisofK-maptosolvethetheBooleanfunctiontothesimplestformfor the implementation of compact digital Circuits.
C204.3	Design various combinational and sequential circuits using various metrics: switching speed, throughput
C204.4	Understanding Interfacing between digital circuits and analog component using Analog to Digital Converter
C204.5	Design and implement semiconductor memories, programmable logic devices (PLDs) and field programmable
COUR SE :	Signal and system

C205	
C205.1	Analyze different types of signals and system properties
C205.2	Represent continuous and discrete systems in time and frequency domain using different transforms
C205.3	Investigate whether the system is stable.
C205.4	Sampling and reconstruction of a signal.
C205.5	Acquire an understanding of MIMO systems
COUR SE : C206	Network Theory
C206.1	Apply the basic circuit laws and simplify the network using network theorems
C206.2	Appreciate the frequency domain techniques in different applications.
C206.3	Apply Laplace Transform for steady state and transient analysis
C206.4	Evaluate transient network parameters response and two-port
C206.5	Analyze the series resonant and parallel resonant circuit and design filters
COUR SE : C207	Electronic Devices
C207.1	Understanding the semiconductor physics of the intrinsic, P and N materials
C207.2	Understanding the characteristics of current flow in a bipolar junction transistor and MOSFET.
C207.3	Understand and utilize the mathematical models of semiconductor junctions and MOS transistors for circuits and systems.
C207.4	Analyze the characteristics of different electronic devices such as Amplifiers, LEDs, Solar cells, etc.
C207.5	Theoretical as well as experimental understanding of Integrated circuit fabrication.
COUR	Electronic Devices Lab

SE : C208	
C208.1	Understand the characteristics of different Electronic Devices
C208.2	Verify the rectifier circuits using diodes and implement them using hardware.
C208.3	Design various amplifiers like CE, CC, common source amplifiers and implement them using hardware and also observe their frequency responses
C208.4	Understand the construction, operation and characteristics of JFET and MOSFET, which can be used in the design of amplifiers.
C208.5	Understand the need and requirements to obtain frequency response from a transistor so that Design of RF amplifiers and other high frequency amplifiers is feasible
COUR SE : C209	Digital System Design Lab
C209.1	Acquired knowledge about basics of logic gates.
C209.2	To minimize circuits. the complexity of digital logic
C209.3	To design and analyse combinational circuits.
C209.4	To design and analyse sequential logic circuits.
C209.5	Able to implement applications combinational & sequential logic circuits.
COUR SE : C210	Signal Processing Lab
C210.1	Able to generate different Continuous and Discrete time signals
C210.2	Understand the basics of signals and different operations on signals.
C210.3	Develop simple algorithms for signal processing and test them using MATLAB
C210.4	Able to generate the random signals having different distributions, mean and variance.
C210.5	Design and conduct experiments, interpret and analyse data and report results.
COUR SE : C210	Computer Programming Lab-1
C210.1	To understand to use basic commands of C.
C210.2	To use vi editor to design and execute C programs.
C210.3	To be able to interact with X-window system and to deal with different X-window systems.
C210.4	To work with different shells and some basic commands over it.
C210.5	To design programs using shell scripts.

Third Year(FIFTH SEMESTER)	
COURSE : C301	Signal & System
C301.1	Understand the mathematical representation and classifications of signals like odd-even, periodic – non periodic, continuous –discrete etc.
C301.2	Able to check various properties like causality, time –variance, stability, memory etc.
C301.3	Apply convolution for finding response of LTI systems that is used in performance analysis of Analog and Digital Communication Systems.
C301.4	Understanding of Fourier series and Fourier transform of different signals for spectrum analysis.
C301.5	Able to perform Laplace and Z transform for stability and causality analysis of various communication and control systems.
COURSE : C302	Linear Intergrated System
C302.1	To know the operation the operational amplifier and its basic components.
C302.2	Apply convolution for finding response of LTI systems that is used in performance analysis of Analog and Digital Communication Systems.
C302.3	Apply convolution for finding response of LTI systems that is used in performance analysis of Analog and Digital Communication Systems.
C302.4	Understanding of Fourier series and Fourier transform of different signals for spectrum analysis
C302.5	Able to perform Laplace and Z transform for stability and causality analysis of various communication and control systems.
COURSE : C303	Telecommunication Engg
C303.1	Able to analyze the various parameters in transmission line i.e. return loss, gain, and S parameters.
C303.2	Understand basic designing methodology for calculate the impedance and admittance value through smith chart.
C303.3	Able to formulate the resonant frequency & their application for Attenuators & Filters.
C303.4	Able to understand the telephone transmission process used in early days.
C303.5	Basic knowledge about the telephone switching system.
COURSE : C304	Analog Communication
C304.1	Understand the concept of noise present in communication
C304.2	Application of amplitude modulation in communication system
C304.3	Able to understand the frequency and phase modulation and its application
C304.4	Analyze the noise performance of different analog modulation systems
C304.5	Students will be able to design discrete signal from continuous by using sampling technique.
COURSE : C305	Microwave Engg-1
C305.1	Aware about the basic operating principles of waveguides and its component

C305.2	Implements the microwave network analysis
C305.3	Understand the basic operating principles of Microwave passive components.
C305.4	Design a simple Microwave measurements system using various component
C305.5	Apply numerical skills to the design of microwave integrated circuit.
COURSE : C306	Biomedical Engg
C306.1	To impart the knowledge of human body & its electrical, mechanical & chemical activities.
C306.2	To cover the activities of bio potentials in human body with neuron potential.
C306.3	To cover the knowledge of biomedical instruments used in clinical laboratories for the measurement of pH, ESR, Hb, O ₂ & CO ₂ concentration in blood.
C306.4	To create an interest & in depth knowledge regarding safety measurement issues, patient care & bio telemetry techniques, physiological studies of bio potential, its effect on cardiac & neural system of human body.
C306.5	Electro- physiological studies of human heart for PSVT & SNRT studies have to be learnt & the procedure for the same must be known. Data acquisition systems with data recording & management knowledge to be gained.
COURSE : C307	EED lab
C307.1	Design of Op Amp for Various applications (Integrator, Differentiator, summer).
C307.2	Design various Filters (LPF, HPF, BPF, BRF) using Op-Amp and analyze the frequency response of its.
C307.3	Design various Oscillators using Op-Amp.
C307.4	Design different Multivibrator circuit using Op-Amp and IC-555 timer.
C307.5	Design of Op Amp and analyze the basic parameters of Op-Amp.
COURSE : C308	Microwave Engg. Lab
C308.1	This course provides the foundation education in Microwave and its devices and makes them to analysis the operation of each device.
C308.2	Analyze the performance of microwave integrated circuits.
C308.3	Students will be able analysis of microwave equipment's and its devices.
C308.4	Student Gained knowledge and understanding of microwave analysis methods.
C308.5	Students will be able to understand the various code conversion techniques using 8085.
COURSE : C309	Communication Lab-1
C309.1	Explain modulation and demodulation techniques in Analog Communications System.

C309.2	Student able to design different types of detectors used in different modulation scheme.
C309.3	Analyze the signal transmission and receiving fundamental concepts.
C309.4	Understand basic operational concept of Multiplexing techniques used in different modulation scheme.
COURSE : C310	Signal Processing Lab
C310.1	Students will able to understand the concept of DDL statement.
C310.2	Students will able to understand the concept of DML and DCL.
C310.3	Students will able to understand database connectivity and embedded SQL.
C310.4	Students will able to understand connectivity of front end HLL with back end database.
C310.5	Students can implement the concept of database to prepare a project.
COURSE :C 311	PROFESSIONAL ETHICS AND DISASTER MANAGEMENT
C311.1	Students will be able to understand the concept of values and social values.
C311.2	Students will be able to understand the concept of corporate culture in companies and firms.
C311.3	Students will be able to understand ethical aspect in their corporate culture and individual behaviour.
C311.4	Students will be able to understand the causes, impact and prevention of various types of disaster
C311.5	Students will be able to understand practical scenario of ethical and moral values with the help of real time case studies.
Final Year(SEVENTH SEMESTER)	
COURSE : C401	Antenna & Wave Propagation
C401.1	Able to know basics parameters of antenna and its characteristics
C401.2	Implementations of the different type of antenna arrays
C401.3	Analyze radiation pattern of different type of antennas
C401.4	Able to analyze different propagation phenomenon used for communication
C401.5	Understand the basic parameters ionosphere layers that effects the propagation.
COURSE : C402	Digital Signal Processing
C402.1	Able to Understand the DT signal processing & changing sampling rate of signals
C402.2	Understand the Transform Analysis of LTI Systems
C402.3	Understand the block diagram & Structures of FIR & IIR system.
C402.4	Designing of IIR & FIR filter
C402.5	Implementation of FFT algorithm
COURSE : C403	Digital Image Processing
C403.1	Able to analyze the fundamentals of image sensing,acquisition, sampling and Quantization..

C403.2	Identify the basics operations of digital images processing using various filter technique.
C403.3	To analyze the Statistics of Image filtration and various types of noise modeling..
C403.4	Implementation of erosion and dilation process with opening and closing properties.
C403.5	Understanding the basics operations of segmentation and compression.
COURSE : C404	Wireless Communication
C404.1	Understand how radio signals can be used to carry information in a spectrally efficient manner
C404.2	2 Able to know how radio signals can be used to carry information in a power efficient manner.
C404.3	Gain insights into how diversity afforded by radio propagation can be exploited to improve performance
C404.4	Have an understanding of design considerations for how to effectively share spectrum through multiple access.
C404.5	Gain knowledge and awareness of the technologies used in Time Division Multiple Access (TDMA), Code Division Multiple Access (CDMA) and WiFi Networks.
COURSE : C405	VLSI Design
C405.1	Model and analysis of the behavior of a MOS Transistor
C405.2	Design combinational and sequential circuits using CMOS gates
C405.3	Identify the sources of power dissipation in a CMOS circuit.
C405.4	Analyze SRAM cell, DRAM cell and memory arrays
C405.5	Students are expertise in VHDL coding of digital circuits..
COURSE : C406	VHDL
C406.1	Construct test and debug digital network using VHDL
C406.2	Learning of programming language with modeling styles
C406.3	Simulation approaches for combinational circuit design.
C406.4	Learners will show Awareness about synchronous & Asynchronous circuits.
C406.5	Ability to use VHDL in Memory organization & design concepts..
COURSE : C407	Signal & Image Processing Lab
C407.1	Simulate various transmitter and receivers for different modulation techniques and they will also able to design different FIR/IIR filters.
C407.2	Analyze images and their different formats for different applications
C407.3	Convert an image from one format to other format..
C407.4	Perform various arithmetic operations on images for

C407.5	Generate histograms for different images and can apply histogram equalization for enhance the quality.
COURSE : C408	Wireless Communication Lab
C408.1	Distinguish between various antennas like YagiUda, Helix and Log-Periodic etc. for different applications
C408.2	To implement GPS technology for different applications..
C408.3	Able to describe various services through satellite & radar communication.
C408.4	Able to describe various features & processing of CDMA technology of communication
COURSE : C409	Practical Training & Industrial Visit
C409.1	Student will get an exposure of real time industry working scenario
C409.2	Student will be able to identify their interest and future aspects in different industries
C409.3	Student will be able to correlate the knowledge between theory and practical exposure during training
C409.4	Students become more aware of industry practices and regulations during industrial training..
COURSE : C410	Project-IProject-I
C410.1	Student will be able to analyze problem occurred during the completion of a project
C410.2	Student will learn about how the given task can be completed within time as a team.
C410.3	Student will be able to work on a project with analyzing optimal cost for completion without compromising the efficiency.
C410.4	Student will have hands on practice on various circuits.
C410.5	Students will be able to strengthen the research and development in recent trends.