

## CO FOR INFORMATION TECHNOLOGY.

2<sup>nd</sup> year

Third semester:

Course name :- MATHEMATICS – III (M-III)

Course outcomes:

CO201.1	Students will be able to solve higher order Diff. Eq.
CO201.2	Students will be able to find Laplace Transform of function and how to solve Diff. Eq. using L.T.
CO201.3	Students will be able to solve Difference Eq. using Z-transform
CO201.4	To solve Fourier Transform And how to solve Part.Diff. Eq. using different methods.
CO201.5	To find the Functions of complex variables, Analytic function and Bilinear, expansion of function in Taylor's
CO201.6	To find the Curl and Gradient of vector field function and gain the knowledge of relation between Line, Surface & Volume integration.

Course name :- Program Methodology

Course outcomes:

CO202.1	Students will be able to understand basic concepts of object oriented programming
CO202.2	Students will be able to write simple java applications and applet
CO202.3	Students will be able to understand how to define a class and use the class in application.
CO202.4	Students will be able to write event driven applets
CO202.5	Students will be able to understand advance concepts of object oriented programming
CO202.6	Students will be able to understand different concepts of Stream management

**Course name :-** Discrete Structure

**Course outcomes:**

CO203.1	Students will be able to study the basic of mathematical logic, predicate calculus.
CO203.2	Students will be able to study basic concept of set theory.
CO203.3	Students will be able to understand semi group, grammar, and expression.
CO203.4	Students will be able to represent Boolean Function
CO203.5	Students will learn the basic results in number theory, logic and graph theory.
CO203.6	Student will be able to learn Finite State Machine

**Course name :-** Electronics Device & Circuits

**Course outcomes:**

CO204.1	Students will be able to introduce the students operational principle and analysis of diode in analog circuits with typical applications.
CO204.2	Students will be able to study the operational principle, modes and models of BJT, FET along with its application as an amplifier.
CO204.3	Students will be able to understand basic principle of oscillator and to get familiar of different types of oscillator. Having basic knowledge of circuit simulation software.
CO204.4	To introduce the basic properties of Op-Amp, analysis and design of electronics circuit using Op-Amp.
CO204.5	To introduce the operational principle and analysis of diode in analog circuits with typical applications.
CO204.6	Students will be able to study the basic principle of timer IC 555, along with its typical application

**Course name :-** Assembly Language Programming

**Course outcomes:**

CO205.6	Students will be able to study the concept of 8086 microprocessor.
CO205.6	Students will be able to study the basic concept of 8086 microprocessor instruction.
CO205.6	Students will be able to study and use of 8086 microprocessor logical, flag, loop

	instruction.
CO205.6	Students will be able to study the concept of stack, subroutine & micro.
CO205.6	Students will be able to study the input output instruction and peripheral interface.
CO205.6	Students will be able to study the concept of interrupts and interrupt controller.

**Semester:Four**

**Course name :-** Data Structure

**Course outcomes:**

CO206.1	To indentify, understand and determine fundamentals of data structure, operation on data structure, complexity and various notations for algorithm
CO206.2	Students will be able to understand and implement array data structure and various operation on array like traversing
CO206.3	Students will be able to understand and implement linked list data structure including singly
CO206.4	To understand and implement stack.
CO206.5	Students will be able to understand and implement tree data structure
CO206.6	Students will be able to understand and implement Graph data structure

**Course name :-** Communication Engineering

**Course outcomes:**

CO207.1	Understand the basic concept of AM and performance of different types of amplitude modulation signals
CO207.2	Analyze the different characteristics of AM receiver
CO207.3	Students will be able to understand and analyze the FM and its generation
CO207.4	Students will be able to gain the concept of FM receiver.
CO207.5	Students will be able to understand sampling theorem & pulse modulation techniques
CO207.6	To Analyze the signal using different mathematical tools.

**Course name :-** Object Oriented Technology

**Course outcomes:**

CO208.1	Students will be able to understand the difference between object oriented programming and procedural programming.
CO208.2	Students will be able to understand the technique of operator overloading, pointer

	,array.
CO208.3	Students will be able to understand the concept of Inheritance .
CO208.4	Students will be able to understand the use of virtual function, friend function ,static function.
CO208.5	Students will be able to understand usage of exception handling, generic programming.
CO208.6	Students will be able to understand the use of various OOPs concepts such as STL ,Iterator with the help of programs

**Course name :-** Social Sciences & Engineering Economics

**Course outcomes:**

CO209.1	Students will be able to study the concept of Social Science
CO209.2	Students will be able to study the basic concept of Indian Parliament
CO209.3	Students will be able to study and use of Science and Technology on culture and Civilization
CO209.4	Students will be able to study the concept of Nature and scope of Economics
CO209.5	Students will be able to study the Functions of Central and Commercial Banks
CO209.6	Students will be able to study the concept of Economics Development

**Course name :-** Numerical Methods & Operation Research Techniques

**Course outcomes:**

CO210.1	Students will be able to study the concept of Error Analysis, absolute, relative and percentage errors.
CO210.2	Students will be able to study the basic concept of Linear Systems of Equation.
CO210.3	Students will be able to study and use of Integration and Differential equations
CO210.4	To study the concept of Operations Research Models and Dynamic Programming.
CO210.5	Students will be able to study the Linear Programming and Sequencing.
CO210.6	Students will be able to study the concept of PERT and CPM technique.

**Year:Third**

**Semester:Fifth**

**Course name :-** Operating System

**Course outcomes:**

CO301.1	Students will be able to understand basic concepts of Operating System
CO301.2	Students will be able to understand different concepts of Process Management in

	OS.
CO301.3	To understand different concepts of Memory Management in OS.
CO301.4	Students will be able to understand different concepts of File System in OS.
CO301.5	Students will be able to understand different concepts of I/O System in OS.
CO301.6	Students will be able to understand different aspects of Linux system.

**Course name :-** Digital Integrated Circuit

**Course outcomes:**

CO302.1	To study the characteristics of digital integrated circuit.
CO302.2	To understand K-map method & Tabulation method.
CO302.3	Students will be able to study the analysis procedure for combinational circuit.
CO302.4	Student will be able to understand MSI & PLD components.
CO302.5	To study the synchronous sequential circuit & flip flop circuit.
CO302.6	Student will be able to understand the algorithmic state machines, RAM, ASM charts

**Course name :-** Computer Architecture and Organization

**Course outcomes:**

CO303.1	Students will be able to study the basic structure of computer, main memory operations and addressing modes.
CO303.2	To study the processing unit, micro programmed control and microinstructions prefetching.
CO303.3	Understand I/O organization, DMA and different types of buses.
CO303.4	Students will be able to study different types of memories, address translation and its management.
CO303.5	Students will be able to study arithmetic operations, booths algorithm and floating point numbers.
CO303.6	Student will be able to understand different computer peripherals with examples.

**Course name :-** Communication Skills

**Course outcomes:**

CO304.1	Students will be able to understand Basics of communications and different barriers related to it.
CO304.2	Students will be able to Improve listening and speaking abilities.
CO304.3	Students will be able to understand different reading techniques and technical writing techniques.

**Course name :-** Introduction to Computer Network

**Course outcomes:**

CO305.1	Students will be able to understand the basics of network communication, Physical layer cabling and importance of data communications and the Internet .
CO305.2	Acquaint computer fundamentals & analyze the services, features and various protocols for OSI layers of data networks.
CO305.3	To gain knowledge about the different internetworking devices and their functions to explore their knowledge in the field of networks.
CO305.4	Students will be able to learn number conversion and able to design, calculate, and apply subnet masks and addresses to fulfill networking requirements.
CO305.5	Able to achieve router configuration and troubleshooting the router interface for fault tolerance & detection.
CO305.6	Students will be able to understand the operation of the protocols that are used inside the Internet

**Semester:six**

**Course name :-** Principle of Management

**Course outcomes:**

CO306.1	Analyze of management process and planning, controlling
CO306.2	Students will be able to Understand the process of organization development
CO306.3	Students will be able to analyze of product development process
CO306.4	Students will be able to understand the maintenance and Quality assurance of product
CO306.5	Provision of marketing management and finance evaluation.

CO306.6	Students will be able to analyze of project and management information system.

**Course name :-** Data Base Management System

**Course outcomes:**

CO307.1	Students will be able to understand basic concepts of database system
CO307.2	Students will be able to design of a database schema using a ER model
CO307.3	Students will be able to understand basic concepts of relational database design
CO307.4	Students will be able to query database using SQL, RE, TRC and DRC
CO307.5	Students will be able to understand different aspects of query processing.
CO307.6	Students will be able to understand different concepts of Transaction management.

**Course name :-** Theory of computation

**Course outcomes:**

CO308.1	To recall & identify different concept of set theory proving techniques & also be able to explain the language classification.
CO308.2	To analyze concept of set theory, convert regular expression to FSA & also able to design finite state machine.
CO308.3	To optimize the construction of context free grammars & also able to construct pushdown automata.
CO308.4	To demonstrate the construction of a Turing machine.
CO308.5	Classify the problems based on their complexity.
CO308.6	Students will able to understand the recursive function theory.

**Course name :-** Computer Networks

**Course outcomes:**

CO309.1	Students will be able to understand basic concepts of Computer Networks
CO309.2	Students will be able to understand different concepts of Data Link Layers
CO309.3	Students will be able to understand different concepts of Medium Access Control Sub layer.
CO309.4	Students will be able to understand different concepts of Network Layer.

CO309.5	Students will be able to understand different concepts of Transport Layer.
CO309.6	Students will be able to understand different aspects of Application Layer.

**Course name :-** Ecommerce

**Course outcomes:**

CO310.1	Students will be able to understand the difference between E Commerce and E Business
CO310.2	Students will be able to understand how Business changes due to Internet
CO310.3	Students will be able to understand the concept of Internet and web
CO310.4	Students will be able to Study the requirement and to build a web site
CO310.5	To study how to provide online security
CO310.6	Students will be able to understand the marketing technologies using Internet

**Year:Fourth**

**Semester:Seventh**

**Course name :-Digital signal processing**

**Course outcomes:**

CO401.1	To introduce the student representation of digital signal in time domain along with basic operation performed on signal.
CO401.2	Students will be able to understand the different types of system and analysis of system using different techniques or method.
CO401.3	To analyze digital signal processing systems using Z-transform.
CO401.4	Students will be able to compute circular convolution and the discrete Fourier transform (DFT) of discrete- time signal.
CO401.5	Students will be able to analyze and implement digital systems using the DFT and the Fast Fourier Transform (FFT).
CO401.6	Students will be able to design digital filters using different method.

**Course name :-Object Oriented Design and Analysis**

**Course outcomes:**

CO402.1	Students will be able to understand basic concepts of OOAD.
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CO402.2	Students will be able to understand basic and basic and advance concepts of class , state and interaction model.
CO402.3	Students will be able to understand and draw class and state diagram.
CO402.4	Students will be able to understand and draw sequence and activity diagram..
CO402.5	Students will be able to understand and apply stages of SDLC to a case study
CO402.6	Students will be able to understand application analysis

**Course name :-Web Technology**

**Course outcomes:**

CO403.1	Gain knowledge of Web Application Terminologies and also to understand the concept of Web Essentials, Markup Languages and internate protocol.
CO403.2	Students will be able to study and understand the Style Sheets in terms of designing, flow & use in world of web technology.
CO403.3	Students will be able to understand the Client-Side Programing, Host Objects, DOM Event Handling for efficiently use of web.
CO403.4	Students will be able to understand Server-Side Programming and its concepts to provide better results regarding web sites and their applications.
CO403.5	To study and understand that how to Represent Web Data, JavaScript, XML,Event Oriented parsing, JSP and server pages needed for Server-Side & Client-Side Programming
CO403.6	Students will be able to understand different Web Services, SOAP, XML Schema.

**Course name :-Real Time Embedded System**

**Course**

**outcomes:**

CO404.1	Students will be able to understand & analyze the importance of embedded system & its scope.
CO404.2	To study the important structural units in a processor & use of term context switching, communication techniques.
CO404.3	To analyze the role of different data structures, embedded programming related

	to ES
CO404.4	Students will be able to understand & analyze the importance of different modeling process & models & different parameters related to operating system configuration
CO404.5	Students will be able to understand the scope of different parameters of OS & its issues.
CO404.6	Students will be able to understand the important role of RTOS & different scheduling mechanism concept

**Course name :-Multimedia Technology**

**Course outcomes:**

CO405.1	To Study the basic concept of multimedia components, Image data types and Popular file formats.
CO405.2	Students will be able to study the concept of color in image and video.
CO405.3	To understand the basics of digital audio and Musical instrument digital interface.
CO405.4	Student will be able to understand the multimedia data compression and lossless image compression.
CO405.5	Students will be able to understand the concept of basic video compression techniques.
CO405.6	Student will be able to understand the basic audio compression technique.

**Semester:Eight**

**Course name :-Digital and Wireless Communication**

**Course outcomes:**

CO406.1	Students will be able to understand the fundamentals of digital communication system with various coding effects.
CO406.2	Students will be able to understand and implements the error detection and correction techniques.
CO406.3	Students will be able to understand the details of spread spectrum modulation with various hopping techniques.
CO406.4	Students will be able to understand the cellular telephone concepts with its architecture

CO406.5	Students will be able to understand GSM architecture with various multiple accessing techniques.
CO406.6	Students will be able to understand the recent trends in WLAN technology with different routing protocol.

**Course name :-Network Administration and security**

**Course outcomes:**

CO407.1	Students will be able to understand & analyze the importance of network security & its goals
CO407.2	Students will be able to study the importance of cryptography & implementation about the different cryptographic algorithms
CO407.3	Students will be able to analyze the role of Kerberos ,PGP & S/MIME in related with network security goals
CO407.4	Students will be able to understand & analyze the importance of IP security & different parameters related to web security considerations
CO407.5	Students will be able to understand the scope of network administration & security
CO407.6	Students will be able to understand the important role of system security, firewall & impact of viruses on system security

**Course name :-Software Engineering**

**Course outcomes:**

CO401.1	Students will be able to understand the basic concept of software Engineering with its different types of process & process model.
CO401.2	Students will be able to understand the basic concept of software measurement and software risk with Decomposition technique and software project plan.
CO401.3	Students will be able to understand the basic concept of project scheduling, software quality and Software Configuration Management.
CO401.4	Students will be able to To understand the basic concept of System engineering with respect to system modeling.
CO401.5	To study different types of architectural and programming styles of software.
CO401.6	To Study the basic concept of different types of testing.

**Course name :-Web Commerce**

**Course outcomes:**

CO408.1	Students will be able to understand basic concepts of web commerce
CO408.2	Students will be able to understand different concepts of Approach to safe E-commerce.

<b>CO408.3</b>	Students will be able to understand different concepts of Electronic cash and Electronic payment scheme.
<b>CO408.4</b>	Students will be able to understand different concepts of Internet/Intranet security issue and solutions.
<b>CO408.5</b>	Students will be able to understand different concepts of Secure E-mail Technologies.
<b>CO408.6</b>	Students will be able to understand different aspects of Internet and web site Establishment.