

Jagadamba College of Engineering & Technology Yavatmal
Department of Computer Engineering (UG)

Year: Second Year	Semester: Third
Course Name: Mathematics III	Course Code: CO23KE01
CO23KE01.1	To Understand L.D.E. And It's Application
CO23KE01.2	How to use L.T.in solution of L.D.E.
CO23KE01.3	To analyze different types of Difference Equation and Z transform
CO23KE01.4	To understand Fourier Transform and PDE
CO23KE01.5	To analyse complex number and function
CO23KE01.6	How to use vectors in different fields

Course Name: Programming Methodology	Course Code: CO23KE02
CO23KE02.1	Able to understand concept of Object Oriented Programming & Java Programming Constructs.
CO23KE02.2	Able to understand basic concepts of Java such as operators, classes, objects, inheritance, packages, Enumeration and various keywords
CO23KE02.3	Able to understand the concept of exception handling and Input/Output operations.
CO23KE02.4	Able to design the applications of Java & Java applet.
CO23KE02.5	Able to Analyse& Design the concept of Event Handling and Abstract Window Toolkit.
CO23KE02.6	Able to understand and design Event-Driven programming

Course Name: Electronic Devices and Circuits	Course Code: CO23KE03
CO23KE03.1	To provide fundamental knowledge of Diodes, rectifiers, DC power supply.
CO23KE03.2	To understand operation of BJT.
CO23KE03.3	To design BJT biasing circuits.
CO23KE03.4	To discuss operation of JFET, MOSFET, VMOSFET.
CO23KE03.5	To study different oscillator circuits.
CO23KE03.6	To discuss construction, operation, characteristics and application of optoelectronic devices.

Course Name: Discrete Structures	Course Code: CO23KE04
CO23KE04.1	To Simplify and evaluate basic logic statements
CO23KE04.2	To discuss the rules of inference and methods of proof
CO23KE04.3	To understand the basic principles of sets and operations in sets
CO23KE04.4	Identify and prove the properties of groups and subgroups
CO23KE04.5	Be familiar with Boolean Algebra
CO23KE04.6	Demonstrate different traversal methods for trees and graphs.

Course Name: Computer Organization	Course Code: CO23KE05
CO23KE05.1	Students will understand the number systems including computer arithmetic
CO23KE05.2	Students will understand the Von Neumann architecture, functional units of the processor .
CO23KE05.3	Students can understand the basics of systems topics: single-cycle(MIPS), multi cycle (MIPS) RISC/CISC architectures, cost
CO23KE05.4	Students will understand cache subsystem, assembly language programming, addressing modes, instructions sets
CO23KE05.5	Identify various types of buses in Computer systems.
CO23KE05.6	Understand memory hierarchy and various peripheral devices.

Year: Second Year	Semester:Fourth
Course Name: Data Structure	Course Code: CO24KE01
CO24KE01.1	To enhance the basic concepts of data structures and algorithms
CO24KE01.2	To understand concepts about array, finding location of element, searching and sorting techniques.
CO24KE01.3	To understand concepts of Linked list.
CO24KE01.4	Ability to describe stack, queue with its different representation methods.
CO24KE01.5	Ability to have knowledge of tree. This is non-linear data structure.
CO24KE01.6	Ability to have knowledge of graphs concepts. It is help to improve logical ability.

Course Name:Analog and Digital ICs	Course Code: CO24KE02
CO24KE02.1	To understand basics and applications of Op-amp with its characteristics,
CO24KE02.2	To understand basic structure of IC-555 with its internal schematics
CO24KE02.3	To understand different types of Number system, To understand complements of number systems
CO24KE02.4	To understand Logic Gates with relation of Boolean theorems
CO24KE02.5	To understand the different combinational circuits with their design procedure
CO24KE02.6	To Understand basic sequential circuit: Flip-Flops, To understand the different Counters

Course Name:Object Oriented Programming	Course Code: CO24KE03
CO24KE03.1	Students will understand how to apply Object oriented approach to design software.
CO24KE03.2	Students will understand how to implement programs using classes and objects.
CO24KE03.3	Students will understand how to specify the forms of inheritance and use the m in programs
CO24KE03.4	Students will understand how to analyse polymorphic behaviour of objects
CO24KE03.5	Students will understand how to implement encapsulation property of classes.
CO24KE03.6	Students will understand the concept of templates

Course Name:Assembly Language Programming	Course Code: CO24KE04
CO24KE04.1	Student will understand basic Concept of 16 bit microprocessors.
CO24KE04.2	Understand basic assembly language syntax; identify and use different 8086 addressing modes.
CO24KE04.3	Highlight and know the uses of the different 8086 instruction groups.
CO24KE04.4	Student will understand how to design program using concept of Stack, Subroutine and Macro.
CO24KE04.5	Microprocessor Interface with hardware and support chips 8255. How to Design Programming related 8255 PPI.
CO24KE04.6	Microprocessor Interface with hardware 8259PIC and how Interrupt is handled by Microprocessor.

Course Name:Theory of Computation	Course Code: CO24KE05
CO24KE05.1	To design Deterministic finite automata, Nondeterministic finite automata and conversion of them
CO24KE05.2	To obtain minimized DFA and interconversion between automata and regular expressions.
CO24KE05.3	Writing CFG's, Construction of parse trees, finding and removing ambiguity in grammars, PDA
CO24KE05.4	Conversion of grammar to CNF, GNF form and conversion of grammar to PDA. Language properties
CO24KE05.5	Designing Turing machines, understanding the working of various types of Turing machines and solving post correspondence problems
CO24KE05.6	Classify decidable and non-decidable problems, solvable and unsolvable problems

Year: Third Year	Semester:Fifth
Course Name:Data Communication	Course Code: CO35KE01
CO35KE01.1	Apply the knowledge of statistical theory of communication and explain the conventional digital communication system.
CO35KE01.2	Apply the knowledge of signals and system and evaluate the performance
CO35KE01.3	Apply the knowledge of digital electronics and describe the error control codes like block code, cyclic code.
CO35KE01.4	Describe and analyze the digital communication system with spread spectrum modulation.
CO35KE01.5	Design as well as conduct experiments, analyze and interpret the results to provide valid conclusions
CO35KE01.6	Describe and analyze Frame Relay Operation, Leaky Bucket Algorithm and Congestion Control.

Course Name: File Structure and Data Processing	Course Code: CO35KE02
CO35KE02.1	To understand the basic concepts of file structures and file processing
CO35KE02.2	To study file manipulation, file and record structure
CO35KE02.3	To understand the concept of how data compression is done and what are its types
CO35KE02.4	To study file merging, object oriented concepts, Unix commands
CO35KE02.5	To understand the concepts of Indexing and trees
CO35KE02.6	To study the concepts of hashing, record distribution

Course Name: System Software	Course Code: CO35KE03
CO35KE03.1	Describe the Basic of Compiler with Various Phases of Compiler
CO35KE03.2	To Understand The Syntax Analysis with Various Top-Down Parsing Technique
CO35KE03.3	Explain The Various Technique of Bottom-Up Parsin
CO35KE03.4	Ability To Explain the concept of Syntax tree and various issue Regarding Syntax directed Translation
CO35KE03.5	Define the Concept of Run-time Environment and Symbol Table
CO35KE03.6	To Analyze the code generation block with various Design issue and Runtime Storage Management

Course Name: Switching Theory & Logic Design	Course Code: CO35KE04
CO35KE04.1	To understand VHDL Modelling Concepts, To understand Fundamentals of VHDL
CO35KE04.2	To understand Array types in VHDL, To understand Complete Architecture body of any VHDL Module
CO35KE04.3	To understand Logic Gates with relation of Boolean theorems, and minimization of expression using k-map & tabular method
CO35KE04.4	To understand the different combinational circuits with their design procedure
CO35KE04.5	To understand the different special combinational circuits , Code Converters, Encoders, Decoders, Mux & Demux
CO35KE04.6	To Understand basic sequential circuit: Flip-Flops, To understand the different Counters

Course Name: Production Management	Course Code: CO35KE05
CO35KE05.1	How to develop new product design and details about FMS & CIM.
CO35KE05.2	To understand the process of forecasting & facility location.
CO35KE05.3	To understand the details of job design & capacity planning. Also understand the meaning of method study.
CO35KE05.4	Identification of aggregate planning for production & scheduling system.
CO35KE05.5	To understand Inventory control & JIT manufacturing.
CO35KE05.6	To analyze Quality Management for quality function deployment & total quality management.

Course Name: Communication Skill	Course Code: CO35KE06
CO35KE06.1	To Understand basics of communication and their importance
CO35KE06.2	How to use LSRW skills for effective communication and objectives and types of interview
CO35KE06.3	To use reading Comprehensions and SQ3R Techniques

Year: Third Year	Semester: Sixth
Course Name: Operating System	Course Code: CO36KE01
CO36KE01.1	Understand The Basic of Operating System and Concept of process
CO36KE01.2	Explain the concept of Scheduling CPU and their Do's Don'ts
CO36KE01.3	Describe the Memory Management Technique and page Replacement Policies
CO36KE01.4	Ability To explain the Different File and Directory System and Their Protection
CO36KE01.5	Define the Input Output System And Disk Scheduling Concept
CO36KE01.6	Understand the Linux system in Brief with Different Characteristics

Course Name: Data Base system	Course Code: CO36KE02
CO36KE02.1	Able to analyze and use relational data model, while comparing with other data models
CO36KE02.2	Able to describe the semantic of a SQL query in set-theoretic terms
CO36KE02.3	Able to design and develop application using an ER-diagramsto express requirements
CO36KE02.4	Develop an ability to remove data redundancy by translating created relational model into normalized designs
CO36KE02.5	Understand the role of database administrator.
CO36KE02.6	To understand and explain the terms like deadlocks, transaction processing, and concurrency control.

Course Name: Computer Architecture	Course Code: CO36KE03
CO36KE03.1	To Understand The Basics of Computer Instruction and types of operations
CO36KE03.2	To get the in depth knowledge of different addressing modes and assembly language
CO36KE03.3	To study the internals, processing and structure of Processor with its functioning
CO36KE03.4	To understand the concept of different architecture machines like RISC and CISC machines
CO36KE03.5	To understand what is the importance of control unit and it functions
CO36KE03.6	To study different types of processing like multiprocessing and multiprogramming

Course Name: Computer Resources Management	Course Code: CO36KE04
CO36KE04.1	To Understand the historical evolution of business and business management theories

CO36KE04.2	Methods for Measuring Availability and Applied Performance & Tuning in different resource area.
CO36KE04.3	Understand network management and storage management
CO36KE04.4	Understand how Capacity Planning is developed
CO36KE04.5	To be familiarity with information security awareness and a clear understanding of its importance
CO36KE04.6	Understand How to Develop Robust Process

Course Name:Introduction to Wireless Technology	Course Code: CO36KE05
CO36KE05.1	To introduce the basic concept of networking with wired & wireless technology
CO36KE05.2	To understand the personal communication system based on different unguided communication media
CO36KE05.3	To illustrate the concept of wireless architecture and technology used in 1G,2G,3G,4G
CO36KE05.4	To understand the concept of cellular telephony, digital network
CO36KE05.5	To learn the concept of roaming with its types,WLAN principals. IEEE 802.11
CO36KE05.6	Communication with satellite system. To study the principals of GPS system with its future use

Course Name:Professional Ethics	Course Code: CO36KE06
CO36KE06.1	To understand basic differences in between morals, ethics and laws
CO36KE06.2	To understand relationship between ethics has to follows while interacting with internet, issues related with privacy
CO36KE06.3	To understand how internet has become a democratic technology, Digital Divide & Y2K Issue

Year: Fourth Year	Semester:Seventh
Course Name: Signal & System	Course Code: CO47KE01
CO47KE01.1	Classify systems based on their properties and determine the response transformation of independent variable signals
CO47KE01.2	Classify systems based on their properties and determine the response of LTI system
CO47KE01.3	To design systems based on Fourier transform and properties
CO47KE01.4	To design system as discrete Fourier transform and differential equation
CO47KE01.5	To understand the process of sampling and the effects of under sampling
CO47KE01.6	To design system based on Z-Transform and functionality

Course Name:Computer Network	Course Code: CO47KE02
CO47KE02.1	To understand the layered architecture of networking and study the basic building blocks of Computer Network
CO47KE02.2	To understand different communication techniques like Frequency, Time and Wavelength division Multiplexing
CO47KE02.3	To understand and demonstrate the basic understanding of different Switching technologies
CO47KE02.4	To understand and get the knowledge of MAC Layer and the associated standards proposed by IEEE
CO47KE02.5	To understand basic functionality of Network Layer along with Routing and Congestion control
CO47KE02.6	To understand the functionality of Transport Layer and fundamental concepts in Security

Course Name:Microprocessor & Interfacing	Course Code: CO47KE03
CO47KE03.1	To Understand the Basic Concept of 8086 Microprocessor.
CO47KE03.2	Understand basic assembly language syntax; identify and use different 8086 addressing modes & Instructions.
CO47KE03.3	To Understand the Concept of I/O and How to interface with I/O device using 8255.
CO47KE03.4	Design system using memory chips and peripheral chips for 16 bit 8086 microprocessor.
CO47KE03.5	Understand and devise techniques for faster execution of instructions.
CO47KE03.6	It covers the software part through teaching of assembly language programming techniques.

Course Name: Computer Graphics	Course Code: CO47KE04
CO47KE04.1	Understand the process of Computer Graphics
CO47KE04.2	Understand the working of display devices and input devices
CO47KE04.3	Understand the complete computer Graphics and its application in modern era
CO47KE04.4	Able to build the programming skill to build gaming and application based on Computer Graphics
CO47KE04.5	Able to understand Structures and hierarchical modelling
CO47KE04.6	Able to understand the concepts of Three dimensional concepts

Year: Fourth Year	Semester: Eighth
Course Name: Digital Signal Processing	Course Code: CO48KE01
CO48KE01.1	Analyze discrete-time systems in both time & transform domain and classification of systems
CO48KE01.2	Analyze discrete-time signals and systems using DTLTI
CO48KE01.3	Student understands continuous-time and discrete-time rational z-Transforms, evaluation of the inverse z-Transforms, analysis of linear time invariant systems in z-domain
CO48KE01.4	Student understands continuous-time and discrete-time Fourier series/transforms
CO48KE01.5	Design and implement digital finite impulse response (FIR) filters, infinite impulse response (IIR) filters
CO48KE01.6	Ability to design, using Matlab-based filter design techniques, FIR and IIR digital filters

Course Name: Embedded System	Course Code: CO48KE02
CO48KE02.1	To Understand the Basic Concept of Embedded System.
CO48KE02.2	To acquire knowledge about microcontrollers embedded processors and their applications
CO48KE02.3	Gives ability to understand the 8051 and interfacing of different peripheral devices with Microcontrollers
CO48KE02.4	To introduce students to the modern embedded systems
CO48KE02.5	Foster ability to understand the design concept of embedded systems
CO48KE02.6	Design real time embedded systems using the concepts of RTOS

Course Name: Software Engineering	Course Code: CO48KE03
CO48KE03.1	Able to understand the different process models and project management concepts
CO48KE03.2	Able to develop skills for cost estimation for software development and understand the software risks
CO48KE03.3	Able to enhance teamwork ability in project scheduling and apply the concepts of software quality assurance
CO48KE03.4	Able to relate and outline system engineering and product engineering process
CO48KE03.5	Able to apply requirement mapping strategies for development of software
CO48KE03.6	Able to apply the knowledge of various software testing methods in software development process

Course Name: Multimedia Technology	Course Code: CO48KE04
CO48KE04.1	To study what is multimedia and what are its components
CO48KE04.2	To study the concepts of colours and videos and types of signals
CO48KE04.3	To understand the basics of digital audio
CO48KE04.4	To understand the concepts of Multimedia Data Compression
CO48KE04.5	To understand the concepts of Basic Video Compression Techniques
CO48KE04.6	To study the concepts of Basic Audio Compression Techniques