Jagadambha College of Engineering & Technology Yavatmal
Department of Computer Engineering(PG- Computer Science & Engineering)

Year: 1st Year	Semester: First
Course Name: ADVANCED COMPUTER ARCHITECTURE	**Course Code: CO11RMEF1**
CO11RMEF1.1	Fundamentals concepts & principles of Computer Design.
CO11RMEF1.2	To Basic principles & DLX. Various hazards
CO11RMEF1.3	To analyze Data hazards & dynamic scheduling as well as Hardware prediction.
CO11RMEF1.4	TO define memories and issues
CO11RMEF1.5	To explain the types of storage devices
CO11RMEF1.6	To define the connections and interconnections of network media

Course Name: Algorithmics	Course Code: CO11RMEF2
CO11RMEF2.1	To introduce mathematical notations and techniques
CO11RMEF2.2	To analyse the control structure and reviewing of data structures
CO11RMEF2.3	TO determine greedy algorithms and complexity as well as examples
CO11RMEF2.4	To explain the concept of dynamic programming and principles of optimality
CO11RMEF2.5	To explain various probability algorithms and techniques to implement the probability algorithms
CO11RMEF2.6	To determine the computational complexity and approximations scheme

Course Name: Operating System Design	Course Code: CO11RMEF3
CO11RMEF3.1	Introduction to OS Internals. Overview of OS and Kernel, Linux And classic UNIX kernels.
CO11RMEF3.2	To define Process Scheduling in Linux: The Linux Scheduling Algorithm,
CO11RMEF3.3	To define Kernel Synchronization in Linux.
CO11RMEF3.4	To discuss time management in linux and kernel notation of time
CO11RMEF3.5	To determine the Virtual File System in Linux
CO11RMEF3.6	To discuss the Process Address Space, the Memory Descriptor, Memory Areas,

Course Name: Expert System Design	Course Code: CO11RMEF4
CO11RMEF4.1	Understand the concept of Expert System & Artificial Intelligence.
CO11RMEF4.2	Understand the concept of Rule based System & Design of Expert System.
CO11RMEF4.3	Theoritical analysis of knowledge Acquisition and Acquisition Methods.
CO11RMEF4.4	Concept of Heruitistics Classification in MUD & MORE.
CO11RMEF4.5	Concept of Hierarchical Hypothesize and Test with Various Case Studies.
CO1RMEF4.6	Understand the concept of various Tools used for Building Expert Systems.

Year: First Year	Semester: Second
Course Name: Computer Communication Networks	**Course Code: CO12RMEF1**
CO12RMEF1.1	The need for speed and quality of service. Advanced TCP/IP and ATM Networks.
CO12RMEF1.2	To understand concepts about Packet-switching networks and Frame relay networks
CO12RMEF1.3	To understand Overview of probability and Stochastic processes and Probability.
CO12RMEF1.4	To determine Congestion control in data networks and internets
CO12RMEF1.5	To determine Overview of graph theory and least-cost paths.
CO12RMEF1.6	To determine Distance-Vector protocol. RIP. Link,State protocol. OSPF. Path-Vector protocols. BGP

Course Name: Advanced Compiling Techniques	Course Code: CO12RMEF2
CO12RMEF2.1	Explain various phases of a compiler
CO12RMEF2.2	Design token recognizer using modern tools.
CO12RMEF2.3	Design Top-down and Bottom-up parsing Techniques.
CO12RMEF2.4	Translate given input to intermediate code.
CO12RMEF2.5	Identify various types of optimizations on intermediate code and generate assembly code.
CO12RMEF2.6	To determine Data-Flow Analysis, Basic Concepts, Taxonomy of Data-Flow Problems,

Course Name: Real-Time Systems	Course Code: CO12RMEF3
CO12RMEF3.1	To understand the concept of real time system as hard and soft real time system
CO12RMEF3.2	To understand the concept of real time scheduling and its approach
CO12RMEF3.3	To understand the concept of clock Drivern scheduling and its Pros and Cons
CO12RMEF3.4	To explain Priority-Driven Scheduling of Periodic Tasks and realted examples
CO12RMEF3.5	To solve the problems related to Scheduling Aperiodic and Sporadic Jobs in Priority-Driven systems
CO12RMEF3.6	Top understand Resources and Resource Access Control and its type in detail

Course Name: Network Security	Course Code: CO12RMEF4
CO12RMEF4.1	TO understand the concept of security,attacks,encryption and keys
CO12RMEF4.2	To be able to get the concepts of program security like malicious program threats
CO12RMEF4.3	To understand the basics of providing operating system security, password and authentication
CO12RMEF4.4	Student should be able to understand security policies and open source systems
CO12RMEF4.5	To provide database security and multilevel security
CO12RMEF4.6	To understand the concept of network security

Course Name: Database Processing	Course Code: CO12RMEF5
CO12RMEF5.1	Students will understand the number systems including computer arithmetic
CO12RMEF5.2	Students will understand the Von Neumann architecture, functional units of the processor .
CO12RMEF5.3	Students can understand the basics of systems topics: single-cycle (MIPS), multi-cycle (MIPS) RISC/CISC architectures, cost

CO12RMEF5.4	Students will understand cache subsystem, assembly language programming, addressing modes, instructions sets
CO12RMEF5.5	Identify various types of buses in Computer systems.
CO12RMEF5.6	Understand memory hierarchy and various peripheral devices.