VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF COMPUTER ENGINEERING

COURSE NUMBER	COURSE OBJECTIVES
Applied Mathematics	**SECOND YEAR 2018 ODD SEM**
CSC301.1	Demonstrate basic knowledge of Laplace transform and will be able to solve ODEs using Laplace transform.
CSC301.2	Expand a given function using Fourier series Expansion.
CSC301.3	To identify the analytic function, harmonic function, Orthogonal trajectories and to find bilinear transformations and Conformal mappings.
CSC301.4	Apply Green's theorem, Divergence theorem and Stoke's theorem to calculate line integral, surface and volume integral and will be able to apply basic knowledge of Z- transform.
Digital Logic Design And Analysis	
CSC302.1	Students will be able to do calculations related to number system and conversions.
CSC302.2	Students will be able to simplify the algebraic equations using different methods and design digital circuits.
CSC302.3	Students will be able to design Combinational and Sequential circuits.
CSC302.4	Students will be able to design digital building blocks using VHDL.
Discrete Mathematics	
CSC303.1	Create sets and able to reason logically.
CSC303.2	Relate sets and able to analyse lattices and associate use of functions.
CSC303.3	Associate use of permutation, functions and graphs in programming applications.
CSC303.4	Demonstrate use of groups and codes in Encoding – Decoding.
Electronic Circuits and Fundamental Communications	
CSC304.1	Students should be able to understand semiconductor devices and carry out their DC analysis. Also to understand the importance of oscillators and power amplifiers in communication system.
CSC304.2	Students should be able to understand the concepts of operational amplifier and their applications.
CSC304.3	Students should be able to understand fundamental concepts of electronics communication
CSC304.4	Students should be able to apply knowledge of electronic devices and circuits to communication applications. Also to study basic concepts of information theory.
Data Structures	
CSC305.1	Student will be able to choose appropriate data structure as applied to specified problem definition
CSC305.2	Student will be able to handle operations on various linear data structures
CSC305.3	Student will be able to demonstrate various methods of organizing large amounts of data using non linear data structures
CSC305.4	Student will be able to select appropriate searching and/or sorting techniques for application development

Applied Mathematics	SECOND YEAR 2018 EVEN SEM
CSC401.1	Apply matrix theory to solve system of linear equations and eigen values and eigen vectors and their applications.
CSC401.2	Evaluate the contour integrals to identify and classify Zeroes, Singular points, Residues and their applications.
CSC401.3	Apply concepts of probability , Correlation & Regression.
CSC401.4	Understand the basic concepts of Sampling theory & Mathematical Programming .
Analysis of Algorithms	
CSC402.1	Students will be able to calculate the efficiency of an algorithm and analyze the problem using divide and conquer approach.
CSC402.2	Students will be able to analyze different problem solving strategies like Greedy method and Dynamic Programming.
CSC402.3	Students will be able to analyze different backtracking, branch and bound strategies.
CSC402.4	Students will be able to analyze strategies for solving problems not solvable in polynomial time and learn different String Matching Algorithms.
Computer Organization and Architecture	
CSC403.1	solving ALU operation.
CSC403.2	To describe instruction level parallelism, hazards in processor pipelines and identify various types of buses, interrupts & I/O operation in a computer system.
CSC403.3	To demonstrate the memory mapping techniques.
CSC403.4	To describe control unit, superscalar architectures, multi-core architectures & their advantages.
Computer Graphics	
CSC404.1	Understand the basic concepts of Computer Graphics. Also Demonstrate various algorithms for scan conversion and filling of basic objects and their comparative analysis.
CSC404.2	Apply geometric transformations, viewing and clipping on graphical objects.
CSC404.3	Explore solid model representation techniques and projections.
CSC404.4	Understand visible surface detection techniques and illumination models.
Operating Systems	
CSC405.1	Apply and analyze the concept of a process and its scheduling, thread, process synchronization and deadlock.
CSC405.2	Evaluate the performance of memory allocation and replacement techniques.
CSC405.3	Apply and analyze different file systems including Linux virtual file system.
CSC405.4	Understanding the concepts of I/O management and techniques of disk Scheduling.

Open Source Technology Lab	
CSL405.1	Understand Basic concepts, working with files, directories with python
CSL405.2	Understanding the data structure concepts in python
CSL405.3	Applying the concepts of django framework for developing python based web applications
CSL405.4	Explore the basic concepts , working with files and directories in perl

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COURSE NUMBER	COURSE OBJECTIVES
Microprocessor	**THIRD YEAR 2018 ODD SEM**
CPC501.1	Understand basic architecture of 16 bit and 32 bit microprocessors.
CPC501.2	Write programs to run on 8086 microprocessor based systems.
CPC501.3	Design System using memory chips and peripheral chips for 16-bit 8086 microprocessor.
CPC501.4	Distinguish between RISC and CISC processors and understand multi core processor with its advantages.
Operating System	
CPC502.1	Apply and analyze the concept of a process and its scheduling, thread, process synchronization and deadlock.
CPC502.2	Evaluate the performance of memory allocation and replacement techniques.
CPC502.3	Apply and analyze different file systems including Linux virtual file system.
CPC502.4	Understanding the concepts of I/O management and techniques of disk Scheduling.
Structured Object Oriented Analysis And Design	
CPC503.1	Students will be able to understand and use different process models.
CPC503.2	Students will be able to Analyze the system requirements and compare traditional approach and object oriented approach.
CPC503.3	Students will be able to design the system using Unified Modeling Language Tool.
CPC503.4	Students will be able to construct the system using Different design techniques.
Computer Network	
CPC504.1	Students will be able to understand the concepts and fundamentals of data communication and computer networks.
CPC504.2	Students will be able to compare different topologies and terminology of computer networking area.
CPC504.3	Student will be able to experience the designing and managing of communication protocols while getting a good exposure to the TCP/IP protocol suit.
CPC504.4	Students will be able to understand issues in network management.
Business Communication And Ethics	
CSL505.1	Design a technical document using precise language, suitable vocabulary and apt style.
CSL505.2	Develop the life skills/interpersonal skills to progress professionally by building stronger relationships.
CSL505.3	Demonstrate awareness of contemporary issues knowledge of professional and ethical responsibilities.
CSL505.4	Apply the traits of a suitable candidate for a job/higher education, upon being trained in techniques of holding a group discussion, facing interviews and writing resume/SOP.
CSL505.5	Deliver formal presentation effectively implementing the verbal and non-verbal skills.

THIRD YEAR 2018 EVEN SEM	
System Programming and Compiler Construction	
CPC601.1	Ability to develop a basic understanding and functioning of systems programs.

CPC601.2	Ability to design and develops the system programs viz. Assembler, Macro-Processor, Linker and Loader.
CPC601.3	Ability to design and develops the modules (phases) of Compiler.
CPC601.4	Ability to understand and use various software tools for development of system program.
Software Engineering	
CPC602.1	Students will be able to understand and use different process models.
CPC602.2	Students will be able to plan, analyze and manage the change in a software project.
CPC602.3	Students will be able to design, develop, & validate the quality software project.
CPC602.4	Students will be able to understand the concepts of Web Engineering.
Distributed Database	
CPC603.1	Students will be able to explain the concept of DD and able to design and implement Distributed databases for enterprise application.
CPC603.2	Students will be able to Identify transaction and concurrency control and deadlock recovery management.
CPC603.3	Students will be able to understand and analyze solutions for query processing and query optimization
CPC603.4	Students will be able to provide solution for heterogeneous databases and use XML for schema integration.
Mobile Communication and Computing	
CPC604.1	Explain basic concepts of cellular, antenna, satellite systems and evolution of mobile communication.
CPC604.2	Explore 3G and 4G Systems and introduction to Android
CPC604.3	Describe how mobile IP facilities data communication over various network.
CPC604.4	Explore Data Communication over wireless LAN and various security issues in mobile computing

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COURSE NUMBER	COURSE OBJECTIVES
Digital Signal Processing	**B. E (ODD SEM)**
CPC701.1	Understand the concept of DT signal and perform signal manipulation
CPC701.2	Perform analysis of DT system in time domain
CPC701.3	Develop FFT flow graph and Fast DSP algorithms
CPC701.4	Design DSP system for real time signal processing
Cryptography And System Security	
CPC702.1	Understand the principles and practices of cryptographic techniques.
CPC702.2	Identify & analyze particular security problems for given application in terms of generic security threats and vulnerabilities.
CPC702.3	Appreciate the application of security techniques & technologies and Apply appropriate security techniques to solve security problem.
CPC702.4	Design security protocols and methods to solve the specific security problems and Familiar with current research issues and directions of security.
Artificial Intelligence	
CPC703.1	Ability to develop a basic understanding of AI building blocks presented in Intelligent agents.
CPC703.2	Ability to choose an appropriate problem solving method and solving the problems by searching.
CPC703.3	Ability to analyze the strength and weaknesses of AI approaches to knowledge– intensive problem solving.
CPC703.4	Ability to design models for reasoning with uncertainty and develop the AI applications in real world scenario.
Soft Computing	
CPE7025.1	Understand the concept of Neural Network and types of learning.
CPE7025.2	Solve problems based on the concept of fuzzy sets, fuzzy relations and fuzzy controllers.
CPE7025.3	Understand the concept of a hybrid system and optimization technique.
CPE7025.4	Understand the concept of Genetic algorithm.
Image Processing	
CPE7023.1	Students will be able to understand basics of digital image procesing & video processsing,explain basic concept of enhancement techniques
CPE7023.2	Students will able to select among various spatial domain and frequency domain filtering techniques for image enhancement
CPE7023.3	Students will perform segmentation techniques,Students will able to perform and develop fast image transform flowgraph
CPE7023.4	Students will able to interpret and apply image compression & decompression techniques,perform Binary image processing Operations.
Data Warehousing And Mining	**B.E 2018 EVEN SEM**
CPC801.1	Apply various supervised and unsupervised mining algorithms for a given data set
CPC801.2	Analyze the given transactional data and to identify interesting patterns.
CPC801.3	Design a data warehouse for a given application and perform OLAP operations to take business decisions.
CPC801.4	Apply all the pre-processing techniques for a given data set.

Human Machine Interaction	
CPC802.1	To design human centric design
CPC802.2	To apply human psychological knowledge of good interfacing in day-to-day activities for HMI
CPC802.3	To criticize existing interface designs, and improve them by creating innovative ideas.
CPC802.4	To design application for social and technical task
Parallel And Distributive System	
CPC803.1	Students will be able to understand the concepts and fundamentals of Distributed System and the middleware technologies that support distributed applications such as RPC, RMI and object based middleware.
CPC803.2	Students will be able to apply the principles and concept in analyzing and designing the distributed system.
CPC803.3	Student will be able to design and implement algorithms and gain an appreciation on the challenges and opportunities faced by parallel and distributed systems.
CPC803.4	Student will be able to improve the performance and reliability of distributed and parallel programs.
Digital Forensic	
CPE8034.1	Identify and categories cybercrimes, preparing incident response and creation of forensic duplication.
CPE8034.2	Handle, extract and classify evidences.
CPE8034.3	Investigate and recover evidences using different tools.
CPE8034.4	Understand the law and apply different laws of computer forensics.
Machine Learning	
CPE8031.1	Students will be able analyze and appreciate the applications which can use Machine Learning Techniques.
CPE8031.2	Students will be able to understand regression, Linear and non-linear data separation and construction of decision trees.
CPE8031.3	Students will be able to understand classification, clustering and dimensionality reduction techniques.
CPE8031.4	Students will be able to understand the working of Reinforcement Learning.

Vidyavardhini's College of Engineering & Technology, Vasai Road (W).

Department of Computer Engineering

Program Educational Objectives (PEO)

1. To enable learner's with a sound foundation in the mathematical, scientific and engineering fundamentals.

2. To enable learner's to use modern tools effectively to solve real life problems.

3. To equip learner's with extensive education necessary to understand the impact of computer a global and social context.technology in

4. To encourage, motivate and prepare learner's for Life-long learning.

5. To inculcate professional and ethical attitude, leadership qualities and commitment to sociable responsibilities.