ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

B. Tech. Scheme of Examination & Syllabus 2024-25

COMPUTER SCIENCE AND ENGINEERING (CYBER SECURITY)

SEMESTER III

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks			Total	No of Hrs for ESE
				L	T	P		Mid-Sem Examination	Continual Examination	End Sem Examination		
1	BSC	24CS301T	Applied Mathematics -III	3	-	-	3	20	20	60	100	3
2	PCC	24CS302T	Data Structure	3	-	-	3	20	20	60	100	3
3	PCC	24CS302P	Data Structure Lab	-	-	2	1	-	25	25	50	
4	PCC	24CS303T	Operating System	3	-	-	3	20	20	60	100	3
5	PCC	24CS303P	Operating Lab	-	-	2	1	-	25	25	50	-
6	PCC	24CS304T	Information Security Fundamentals	3	-	-	3	20	20	60	100	3
7	PCC	24CS305P	Basics of Ethical Hacking Lab			4	2	-	25	25	50	-
8	VEC	24ES301T	Value Education Course-I	2	-	-	2	10	10	30	50	1.5
9	ELC	24CS306P	Micro Project-I	-	-	2	1	-	50	-	-	-
10	PCC	24CS307P	Computer Workshop - II			2	1	-	25	25	50	-
11	MDM-I	24CS331M	Multidisciplinary Minor	2	-	-	2	10	10	30	50	1.5
Total				**16**		**12**	**22**	**100**	**250**	**400**	**700**	**15**

		August 2024	NEP 2.0	**Applicable for 2024-25**
Chairman - BoS	**Dean – Academics**	**Date of Release**	**Version**	

THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	**ESE**	**Total**
24CS301T	**Applied Mathematics-III**	**3**	**-**	**-**	**3**	**40**	**60**	**100**

Course Objectives	Course Outcomes
The aim of this course is • To introduce the essential concepts of Theory of Probability. • To familiarize the students with concepts in linear algebra and statistics.. • To provide general understanding of cyber security relationship with numbers.	**Students will be able to** • To compute with integers modulo n, and understand congruence classes, division algorithms, Euler's theorem, and possibly the Chinese Remainder Theorem • Identify engineering problems related to Matrices: Eigen value & Eigen vectors & Functions of Matrices. • Apply various concepts of vector spaces. • Apply various concepts of joint distribution. • Use statistical methods and tools in engineering problems.

Unit I [8Hrs]
Analytic Number theory:
Eulid's Lemma, Euclidean algorithm, basic properties of congruences, residue classes and complete residue system, Euler Fermat theorem, Lagrange's theorem and its applications, Chienese remainder theorem, primitive roots.

Unit II [8Hrs]
Matrices: Linear dependence of vectors, Characteristics equation, Eigen values and Eigen vectors, Reduction to diagonal form, Reduction of quadratic form to canonical form by orthogonal transformation, Sylvester's theorem.

Unit III [6Hrs]
Vector Space: Subspaces, Linear Dependence/Independence, Basis, Dimension, Linear transformation, Range Space and Rank, Null Space and Nullity, Rank nullity theorem, Matrix Representation of a linear transformation, Linear Operators on R^n

Unit IV [8Hrs]
Probability: Baye's rule, Review of discrete and continuous random variables, Joint probability function of discrete random variable, Marginal probability function and Conditional distribution of discrete random variable, Mathematical expectation of discrete random variable, Variance and Standard deviation, and Covariance of joint distribution.

Unit V [8Hrs]
Statistics: Multiple regression analysis, Regression equation of three variables, Measures of central tendency, Mean, Median, Mode, Mean deviation, Standard deviation, Testing a hypothesis, Null hypothesis, Alternative hypothesis, t-test, F-test and Chi square test.

Text Books

S.N	Title	Authors	Edition	Publisher
1	Linear Algebra and Its Application (Paperback)	Gilbert Strang	2007	Nelson Engineering
2	Higher Engineering Mathematics	B.S. Grewal	40th Edition	Khanna Publication
3	Theory & problems of Probability and Statistics	Murray R. Spiegel		Schaum Series, Mc Graw Hills

Reference Books

S.N	Title	Authors	Edition	Publisher
1	Advanced Engineering Mathematics	Erwin Kreysizig	8th Edition	Wiley India
2	Linear Algebra	Seymour Lipschutz etal	3rd Edition	Schaum series.
3	First course in Linear Algebra	Nagpaul,		Wiley Eastern Ltd, New Delhi
4	Higher Engineering Mathematics	H.K Dass & Er. Rajesh		S. Chand Publication.

		March 2025	1	Applicable for 2024-25
Chairman - BoS	Dean – Academics	Date of Release	Version	

THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
24CS302T	Data Structures	3	-	-	3	40	60	100

Course Objectives	Course Outcomes
This course is intended • To provide knowledge of basic concepts in data structures and algorithms. • To choose the appropriate data structure and algorithm design method for a specified application. • To efficiently implement the different data structures and solutions for specific problems	**Students will be able to** • To understand the basic concept of data structures, time complexity and analyse the various sorting and searching algorithms. • To implement dynamic data structures like singly, doubly and circular linked list. • Apply the different linear data structures like stack and queue to various computing problems. • Implement different types of trees and apply them to problem solution. • Demonstrate the representation of graphs and their applications in real life problem.

Unit I [8Hrs]

Introduction: - Concept of Data structures, Time and space analysis of algorithms, Big oh , theta notations and omega notations, Average, best and worst case analysis

Searching and sorting techniques- Linear search, Binary search, Insertion sort, selection sort, Bubble Sort, radix Sort, Merge Sort, Quick Sort.

Unit II [9Hrs]

Linked Lists : Concept of LL, Types of LL, operations on linked list, Singly linked list, polynomial representations and manipulations are using linked list, circular linked list, doubly linked list, Implementation of linked list using static and dynamic memory allocation ,Generalized list, sparse matrix.

Unit III [8Hrs]

Stack and Queue - Array representation of stacks, Implementation of stack using linked lists, Queues ,Dequeue, Circular queue, Polish notation, Application of stack & queue: Conversion from Infix to Postfix ,Evaluation of postfix expressions, Priority Queues

Unit IV [7Hrs]

Trees: Basic Terminology, Application of trees ,Basic trees, Binary tree representations, threaded storage representation, binary tree traversals, binary search trees, Preliminary treatment of AVL Trees.

Unit V [8Hrs]

Graphs: Definition & terminology, Graph representation: matrix representation of Graph, List of structure, other representation of graphs, Breadth First Search, Depth First Search, Spanning trees, Shortest path algorithm, topological sorting.

Text Books

S.N	Title	Authors	Edition	Publisher
1	Fundamentals of Data Structure	Horowitz and Sahani	2 Edition	CBS Publications
2	Data Structures using	Tanenbaum	2 Edition	C Pearson Education
3	Data structure and Algorithm	Lafore	2 Edition	BPB Publication

Reference Books

S.N	Title	Authors	Edition	Publisher
1	Data Structure and Program Design in C	Kruse, Leung and Tondo	II Edition	PHI
2	Schaum's outline: Data Structures	Seymour Lipschutz	-	Tata Mc Graw Hill
3	An Introduction to DS with applications	Trembley and sorenson	-	Mc Graw Hill

		March 2025	1	Applicable for 2024-25
Chairman - BoS	Dean – Academics	Date of Release	Version	

ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY,NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

B. Tech. Scheme of Examination & Syllabus 2024-25
COMPUTER SCIENCE & ENGINEERING (CYBER SECURITY)

THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
24CS302P	Data Structures Lab			2	1	25	25	50

Course Objectives	Course Outcomes
This course is intended • To emphasize the application of data structures in developing and implementing efficient programs and algorithm	**Students will be able to** • Select appropriate data structures as applied to specified problem definition. • Implement linear and Non-Linear data structures. • Implement operations like searching, insertion, deletion and traversing mechanism etc. on various data structures. • Determine and analyze the complexity of given Algorithms.

Expt. No.	Experiments based on
1	To design and implement basic C program using arrays & structures.
2	To implement a Menu driven program for linear & Binary search methods and demonstrate their constraints.
3	To implement a Menu driven program for Sorting methods and analyze their performances.
4	To implement a Program to demonstrate the working of a stack.
5	To implement a Program to demonstrate the working of a Queue
6	To implement a Program to apply the concepts of linked list
7	To implement the non- linear data structure binary tree
8	To implement BFS and DFS in graph

Text Books

S.N	Title	Authors	Edition	Publisher
1	Data Structure and Program Design in C	Kruse, Leung and Tondo	1st Edition	PHI
2	Schaum's outline: Date Structures	Seymour Lipschutz	-	Tata Mc Graw Hill
3	An Introduction to DS with applications	Trembley and sorenson	1st Edition	Mc Graw Hill

Reference Books

S.N	Title	Authors	Edition	Publisher
1	Data Structure and Program Design in C	Kruse, Leung and Tondo	1st Edition	PHI
2	Schaum's outline: Data Structures	Seymour Lipschutz	-	Tata Mc Graw Hill
3	An Introduction to DS with applications	Trembley and sorenson	1st Edition	Mc Graw Hill

		March 2025	1	Applicable for 2024-25
Chairman - BoS	Dean – Academics	Date of Release	Version	

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
24CS303T	Operating System	3			3	40	60	100

Course Objectives	Course Outcomes
This course is intended	**Students will be able to**
- Make the students familiar with the basics of Operating system - Introduce the notaion of process,various features of process ,CPU scheduling algorithm - Discuss the goal and principles of system protection & Security in modern computer system	- Describe basic concept of Operating System. - Identify and solve problems involving process management & memory management. - Understand the Process synchronisation in operating system. - Identify and solve problems involving in memory management issues. - Demonstrate security issues

Unit I	[8Hrs]

Unit I : Importance of Operating Systems, Basic Concepts and Terminology, An Operating System Acrhitecture, types of Operating System ,Operating System as a Maneger :Manager Memory Management Functions, Processor Management Functions, Device Management Functions, Information Management Functions,Files and Security, System calls for Process Management, File Management and Directory Management.

Unit II	[8Hrs]

Unit II :Management Processes Concept :Processes and Threads. Process Model and Thread Model. Job Scheduler, Process Scheduling, operation on process,. Overview of Inter-process communication: Race Conditions, Critical Regions, Mutual Exclusion with busy waiting etc. .CPU Scheduling: Introduction to Scheduling, Scheduling criteria, Scheduling Algorithms, Algorithm Evaluation and Scheduling in different Systems.

Unit III	[8Hrs]

Unit III :Process Synchronization Synchronization Hardware, Semaphores, and Classical Problem of Synchronization, Introduction to Deadlocks: Graphical repersentaion of a deadlock, Deadlock strategies: Ignore a deadlock,detect a deadlock ,Recover from a deadlock ,Prevent a deadlock,Avoid a deadlock.

Unit IV	[8Hrs]

Memory Management :Single Contiguous Memory Management ,Fixed Partition Memory Management : Introduction ,Allocation Algorithm,swapping ,relocation and address traslation Variable Parttion: Introduction ,Allocation Algorithm,swapping ,relocation and address traslation,Non-contigious Allocation -general concepts , Paging ,Segmentation Virtual Memory Management system :general concepts ,Page replacement algorithm

Unit V	[8Hrs]

Introduction to Linux, Features, Shell, Shell types, Terminal, Basic Commands, Basic networking commands, File Handling Commands, Linux/Unix file system, Linux File system architecture, Linux file Hierarchy concepts, File and Directory names, Absolute and relative Path names, Linux file permission and basic user management.

Text Books

S.N	Title	Authors	Edition	Publisher
1	Operating System	A.Godbole	3rd Edition	The McGraw-Hill.
2	Operating systems: Internals & design principles	William Stallings,	7th Edition	Pearson

Reference Books

S.N	Title	Authors	Edition	Publisher
1	Operating System Concepts	Silberschatz,Galvin	8 or 10th edition	Wiley

		March 2025	1	Applicable for 2024-25
Chairman - BoS	Dean – Academics	Date of Release	Version	

FOURTH SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
24CS303P	**Operating System Lab**			**2**	**1**	**25**	**25**	**50**

Course Objectives	Course Outcomes
This course is intended • Students will gain practical experience with designing and implementing concepts of operating systems such as system calls, CPU scheduling, process management, memory management, file systems and deadlock handling using C language in Linux environment.	• Understand and implement basic services and functionalities of the operating system using system calls. • Analyze and simulate CPU Scheduling Algorithms like FCFS, Round Robin, SJF, and Priority. • Implement memory management schemes and page replacement schemes. • Understand the concepts of deadlock in operating systems and implement them in multi programming system.

Expt. No.	Title of the experiment
1	Demonstate various operating system also understand Basic UNIX Commands and various UNIX editors such as vi, ed, ex and EMACS.
2	Implement First Come First Serve CPU Scheduling algorithm
3	write a C program for implementation of Priority scheduling algorithm.
4	Write a C program to simulate Bankers algorithm for the purpose of deadlock avoidance
5	Write a C program to simulate the following contiguous memory allocation techniques :a) Worst-fit b) Best-fit c) First-fit
6	Demonstrate Producer-consumer problem Using semaphores
7	Simulate Page Replacement Algorithms FIFO
8	Simulate LRU Page Replacement Algorithms LRU
9	Simulate OPTIMAL Page Replacement Algorithms
10	Simulate Algorithm For Deadlock Prevention

		March 2025	1	Applicable for 2024-25
Chairman - BoS	Dean – Academics	Date of Release	Version	

THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
24CS304T	Information Security Fundamentals	3	-	-	3	40	60	100

Course Objectives	Course Outcomes
• Introduce the basic concepts of **information security, threats, and vulnerabilities**. • Provide **fundamental knowledge** of cryptography and security mechanisms. • Familiarize students with **authentication, access control, and network security essentials**. • Lay the foundation for **advanced security topics** in subsequent semesters.	Upon completion, students will be able to: Explain the **fundamental principles of information security**. 1. Identify and analyze **security threats, attacks, and vulnerabilities**. 2. Describe **basic cryptographic techniques and security protocols**. 3. Apply **authentication and access control mechanisms**.

Unit I	[6Hrs]

Introduction to Information Security :

Definitions of information security, cyber security, and data protection. Security Goals: Confidentiality, Integrity, Availability (CIA). Threats & Attacks: Malware, Phishing, DoS, Social Engineering. Risk Management: Vulnerability assessment, Penetration Testing. Security Mechanisms & Policies: Defense-in-Depth, Zero Trust Model.

Unit II	[8Hrs]

Basics of Cryptography :

Introduction to Cryptography & Security Services. Classical Cryptographic Techniques: Caesar Cipher, Vigenère Cipher, Play fair Cipher. One-Time Pad & Substitution Techniques. Introduction to Modern Symmetric Cryptography (AES, DES). Hash Functions: MD5, SHA-1, SHA-256.

Unit III	[8Hrs]

Authentication & Access Control :

Authentication Mechanisms: Passwords, Multi-Factor Authentication (MFA), Biometric Systems. Access Control Models: Discretionary Access Control (DAC), Mandatory Access Control (MAC), Role-Based Access Control (RBAC). Security Tokens & Smart Cards. Authentication Protocols: Kerberos, CHAP, OAuth.

Unit IV	[8Hrs]

Network Security Fundamentals :

Introduction to Network Security & Secure Communication. Firewalls & Intrusion Detection Systems (IDS/IPS). Transport Layer Security (TLS), Secure Sockets Layer (SSL). Wireless Security Protocols: WPA2, WPA3, WEP. Email Security: PGP, S/MIME.

Unit V	[8 Hrs]

Application Security & Future Trends :

Security in Web Applications: SQL Injection, Cross-Site Scripting (XSS), CSRF. Cloud Security Concepts: Data Encryption, Identity Management, Shared Responsibility Model. IoT Security Basics: Device Authentication, Secure Firmware Updates. Artificial Intelligence in Cyber security: Threat Detection, Behavior Analysis.

Text Books

S.N	Title	Authors	Edition	Publisher
1	Applied Cryptography: Protocols, Algorithms, and Source Code in C	Bruce Schneier	II Edition	Wiley India Pvt ltd
2	Cryptography and Network Security: Principles and Practice	William Stallings	I Edition	Pearson

Reference Books

S.N	Title	Authors	Edition	Publisher
1	Network Security and Cryptography	**Bernard Menezes**	-	Cengage Learning
2	Cryptography and Network Security	Berouz Forouzan	I	Tata Mc Graw Hill

		March 2025	1	Applicable for 2024-25
Chairman - BoS	Dean – Academics	Date of Release	Version	

THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
24CS305P	**Basics of Ethical Hacking**	_	-	4	2	25	25	50

Course Objectives	Course Outcomes
This course is intended • Understand the fundamental principles, methodologies, and ethical considerations of hacking and develop practical skills in footprinting, scanning, enumeration, and system hacking techniques. • Learn advanced hacking methodologies, including denial of service attacks, session hijacking, and web server exploitation. • Gain proficiency in identifying and exploiting common web application vulnerabilities. • Understand network hacking techniques, including SQL injection, wireless networking hacking, and evading intrusion detection systems (IDS) and firewalls. • Learn about viruses, worms, and physical security measures to protect information assets.	Students will be able to • Students can explain the ethical considerations and legal implications of hacking activities. With footprinting, scanning, and enumeration activities to gather information about target systems. • Students can identify common vulnerabilities in systems and networks and demonstrate proficiency in exploiting them. • Students can analyze web application vulnerabilities and employ appropriate techniques to exploit them. • Students can demonstrate proficiency in network hacking techniques, including SQL injection, wireless networking hacking, and evasion of IDS and firewalls. • Students can explain the characteristics of viruses, worms, and physical security measures and propose strategies to mitigate their impact.

Unit I	[7Hrs]

Introduction to Ethical Hacking: Hacking Methodology, Process of Malicious Hacking: Footprinting and Scanning, Footprinting, Scanning, Enumeration, System Hacking and Trojans System Hacking,Trojans. Black Box Vs White Box Techniques.

Unit II	[7Hrs]

Hacking Methodology: Denial of Service, Sniffers, Session Hijacking, Hacking Web Servers:Session Hijacking, Hacking Web Servers.

Unit III	[7Hrs]

Web Application Vulnerabilities and Web Techniques: Web Application Vulnerabilities, Web Based Password Cracking Techniques.

Unit IV	[8Hrs]

Web and Network Hacking: SQL Injection, Hacking Wireless Networking, Viruses and Worms, Physical Security, Linux Hacking.

Unit V	[7Hrs]

Evading IDS and Firewalls, Report Writing & Mitigation : Evading IDS and Firewalls, Introduction to Report Writing & Mitigation, Requirements for low-level reporting & high-level reporting of Penetration testing results, Demonstration of vulnerabilities and Mitigation of issues identified including tracking.

Text Books

S.N	Title	Authors	Edition	Publisher
1	The Web Application Hacker's Handbook: Finding and Exploiting Security Flaws.	Dafydd Stuttard, Marcus Pinto,	First Edition	Wiley Publications
2	Title: "Ethical Hacking and Countermeasures: Attack Phases.	EC-Council	First Edition	EC-Council

Reference Books

S.N	Title	Authors	Edition	Publisher
1	Hacking: The Art of Exploitation	Jon Erickson	Second Edition	No Starch Press
2	Penetration Testing: A Hands-On Introduction to Hacking.	Georgia Weidman	Second Edition	No Starch Press

		March 2025	1	Applicable for 2024-25
Chairman - BoS	Dean – Academics	Date of Release	Version	

ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY,NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

B. Tech. Scheme of Examination & Syllabus 2023-24
COMPUTER SCIENCE & ENGINEERING(CYBER SECURITY)

THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
23CS331M	**Fundamentals of Network Security**	2			2	20	30	50

Course Objectives	Course Outcomes
This course is intended • Learn fundamentals of application to network security. • Understand network security threats, security services, and countermeasures. • Understand vulnerability analysis of network security.	**Students will be able to** • Understand the network security services mechanism and methodology. • Identify and design the various types of network architecture. • Identify and analyze the working of firewall and IDS • Understand the protocols involved in network security. • Understand various types of virus and trusted systems.

Unit I	[6Hrs]

Security Fundamentals:
Introduction of Security, Security methodology, The three D's of Security, Five steps to better security, Network security model, Security goals, Security Services and mechanisms, Challenges to Network Security, Attacks,

Unit II	[4Hrs]

Network Architecture Fundamentals:
Network Segments & Types, Perimeter Defense, Network Address Translation, Basic Architecture Issues, Subnetting, Switching, and VLANs, Address Resolution Protocol and Media Access control,

Unit III	[6Hrs]

Addressing and Firewall:
IP addressing, Classes, Rules for assigning Host ID and Network ID, Firewall: Need of Firewall, Firewalls – Design and Types of Firewalls, Personal Firewalls, IDS, Types of IDS, Responses of Intrution Detection. Metjods and modes of IDS.

Unit IV	[4Hrs]

Network Security
Security concerns, Introduction to IPSEC, Tunnel mode, Transport mode, Introduction to handshake protocols, Record layer protocol, Internet Key Exchnage protocol(IKE)

Unit V	[4Hrs]

Security in Networks:
Trusted System, Viruses and related Threats, Taxanomy of malacious programs, Nature of Virus, Types of Virus, Advanced Antivirus techniques.

Text Books

S.N	Title	Authors	Edition	Publisher
1	Applied Cryptography- Protocols, Algorithms and source code in "c"	Bruice Schneier	II Edition	Wiley India Pvt ltd
2	Network Security and Cryptography	Bernard Menzees	I Edition	Cengage Learning

Reference Books

S.N	Title	Authors	Edition	Publisher
1	Cryptography and Network Security Principal and Practice	Wiiliam Stalling	-	Pearson edition
2	Cryptography and Network Security	Berouz Forouzan	I	Tata Mc Graw Hill

		May 2024	1.3	Applicable for 2023-24
Chairman - BoS	Dean – Academics	Date of Release	Version	

THIRD SEMESTER

Course Code	Course Name	Th	Tu	Pr	Credits	Evaluation		
						CA	ESE	Total
23ES301T	VEC-I	2	-	-	2	20	30	50

Course Objectives	Course Outcomes
This course is intended • To develop a holistic perspective through self-exploration and development of clarity about harmony between self, family, society and nature.	**Students will be able to** • demonstrate awareness about concepts like self exploration & natural acceptance. • understand concepts of aspirations and happiness. • develop clarity of harmony and health in human being. • discuss concepts of conservation of nature and harmony in nature/existence and re-usability.

Unit I : Introduction to Self-Exploration	[6Hrs]

- Purpose & motivation for studying universal human values.
- Self-Exploration–what is it? - Its content and process.
- 'Natural Acceptance' and Experiential Validation- as the process for self-exploration.

Unit II: Understanding Happiness and Prosperity	[6Hrs]

- Understanding Happiness and Prosperity correctly.
- Continuous Happiness and Prosperity- A look at basic Human Aspirations.
- Right understanding, Relationship and Physical Facility.
- Method to fulfill the above human aspirations: understanding and living in harmony at various levels.

Unit III: Understanding Harmony in human being	[6Hrs]

- Understanding human being as a co-existence of the sentient 'I' and the material 'Body'.
- Understanding the needs of Self ('I') and 'Body' - happiness and physical facility.
- Understanding the Body as an instrument of 'I' (I being the doer, seer and enjoyer).
- Understanding the characteristics and activities of 'I' and harmony in 'I'.
- Understanding the harmony of I with the Body: Sanyam and Health.

Unit IV: Co-existing with nature	[6Hrs]

- Understanding the harmony in Nature.
- Interconnection and mutual fulfillment among the four orders of nature- recyclability and self-regulation in nature.
- Understanding Existence as Coexistence of mutually interacting units in all-pervasive space.
- Holistic perception of harmony at all levels of existence.
- Pollution, depletion of resources and role of technology.

Text Books

Sr.No.	Title	Authors	Edition	Publisher
1	Human Values and Professional Ethics	Gaur, Sangal, Bagaria	2010	Excel Books, New Delhi

Reference Books

Sr.No.	Title	Authors	Edition	Publisher
1	Jeevan Vidya: Ek Parichaya	A. Nagaraj	1999	Jeevan Vidya Prakashan, Amarkantak
2	Human Values	A.N. Tripathi	2004	New Age Intl. Publishers, New Delhi
3	The Story of My Experiments with Truth	M.K.Gandhi	2009	Fingerprint! Publishers

		March 2025	1	Applicable for 2024-25
Chairman - BoS	Dean - Academics	Date of Release	Version	