ARISE & SHINE

ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR
(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)
B.VOC. Scheme of Examination & Syllabus 2024-25
SOFTWARE DEVELOPMENT

FIFTH SEMESTER

COURSE CODE	COURSE NAME	TH	TU	PR	CREDITS	EVALUATION		
						CA	ESE	TOTAL
BV502T	Employability Skills-II	3	-	-	3	30	70	100

COURSE OBJECTIVES	COURSE OUTCOMES
• To understand Data Structures & Algorithms • Develop proficiency in key aptitude areas, such as quantitative aptitude, logical reasoning, and verbal ability.	**At the end of the course, students will be able to:** **CO1.** Understand Data Structures & Algorithms **CO2.** Understand Linked Lists & searching techniques **CO3.** Understand Structures sorting **CO4:** Understand Graph and Tree Data Structure

UNIT I: Data Structures & Algorithms [10 HRS]

Overview, Algorithms Basics, Programming, Data Structures & Algorithm Basic Concepts, Data Structures and Types, Data Structures and Algorithms – Arrays.

UNIT II: Linked Lists & searching techniques [15 HRS]

Introduction to stack & Queue, Linked List basics, Doubly linked list, Circular Linked list, Stack & Queue, Searching Techniques, Linear search, Binary Search, Interpolation Search, Hash table

UNIT III: Data Structure Sorting [10 HRS]

Sorting Techniques, Algorithms ,Bubble Sort, Insertion sort, Selection Sort,Merge Sort, Shell Sort, Quick Sort.

UNIT IV: Graph and Tree Data Structure [15 HRS]

Depth First Traversal, Breadth first Traversal, Tree Data Structure ,Tree Traversal, Binary Search tree, AVL tree, B tree, Spanning tree, Tries, Heap.

TEXT/ REFERENCE BOOKS

S.N	Title	Authors	Edition	Publisher
1	Introduction to Algorithms	Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein.	3rd	PHI
2.	Data strctures & Algorithms made easy	Narsimha Karumanchi	1st	Career monk
3.	Data Structure & algorithms	Prof. Dippanita Mondal	1st	Everest publishing house

		OCT-2022	1.0	**APPLICABLE 2024-25**
CHAIRMAN- BoS	**DEAN (ACADEMICS)**	**DATE OF RELEASE**	**VERSION**	