

# LESSON PLAN

SUB: DATA STRUCTURES & ALGORITHMS LAB

BRANCH:- COMPUTER SCIENCE & ENGG.

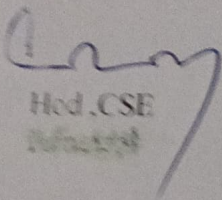
SEMESTER: 3rd

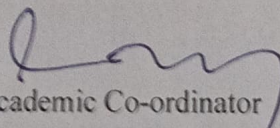
NAME OF FACULTY: ABHISHEK PADHI (GF in CSE)

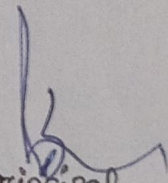


## GOVERNMENT POLYTECHNIC, BHADRAK

SESSION: 2025-26

  
Hed, CSE  
In-charge

  
Academic Co-ordinator  
**Academic Co-ordinator**

  
Principal  
Govt. Polytechnic, Bhadrak

DEPARTMENT OF Computer Science & Engg.,



<b>Discipline:</b> Computer Science & Engineering	<b>Semester:</b> 3rd Winter/2025	<b>Name of the faculty:</b> ABHISHEK PADHI <b>Email Id:</b> abhishekpadi24@gmail.com
<b>Subject:</b> Data Structure & Algorithms Lab (Pr-3)	<b>No. of Days/week:</b> 04	<b>StartDate:</b> 14/07/2025 <b>EndDate:</b> 15/11/2025

Week	Class Day	Practical Topics
1 <sup>st</sup>	1 <sup>st</sup>	Write a program to analyze & compare the time complexity of basic operations on arrays & linked lists
	2 <sup>nd</sup>	Implementation of Stack operation using arrays & linked lists
2 <sup>nd</sup>	1 <sup>st</sup>	Implementation of Stack operation using arrays & linked lists, Develop programs for application of stack
	2 <sup>nd</sup>	Develop programs for application of stack
3 <sup>rd</sup>	1 <sup>st</sup>	Implement queue operations using arrays & linked lists
	2 <sup>nd</sup>	Implement queue operations using arrays & linked lists, Write a program for types of queues
4 <sup>th</sup>	1 <sup>st</sup>	Write a program for types of queues
	2 <sup>nd</sup>	Implement of singly linked list operations
5 <sup>th</sup>	1 <sup>st</sup>	Write a program to create & manipulate circular & doubly linked lists
	2 <sup>nd</sup>	Write a program to create & manipulate circular & doubly linked lists
6 <sup>th</sup>	1 <sup>st</sup>	Implement queue & stack operations using linked lists
	2 <sup>nd</sup>	Implement queue & stack operations using linked lists
7 <sup>th</sup>	1 <sup>st</sup>	Implementation of Binary tree operation
	2 <sup>nd</sup>	Implementation of Binary tree operation
8 <sup>th</sup>	1 <sup>st</sup>	Develop programs for types of binary trees
	2 <sup>nd</sup>	Develop programs for types of binary trees
9 <sup>th</sup>	1 <sup>st</sup>	Implementation of graph representation
	2 <sup>nd</sup>	Implementation of graph representation
10 <sup>th</sup>	1 <sup>st</sup>	Basic graph traversals
	2 <sup>nd</sup>	Basic graph traversals
11 <sup>th</sup>	1 <sup>st</sup>	bubble sort
	2 <sup>nd</sup>	selection sort



12th	1 <sup>st</sup>	Insertion sort
	2nd	Merge sort
13th	1 <sup>st</sup>	quick sort
	2nd	Write a programs for searching using binary search trees and hash tables
14th	1 <sup>st</sup>	Write a programs for searching using binary search trees and hash tables
	2nd	Implementation of symbol table operation using balanced search trees
15th	1 <sup>st</sup>	Implementation of symbol table operation using balanced search trees
	2nd	Revision

Abhishek Padhe  
Signature of faculty