

TECNIA INSTITUTE OF ADVANCED STUDIES
Grade 'A' Institute
Department of Information, Communication & Technology
Bachelor of Computer Applications (BCA)
Scheme and Syllabus (w.e.f. Academic Session 2024-25)
As per UGC Curriculum & Credit Framework for Undergraduate Programme (CCFUP)
(Dec 2022): GGSIP University, Delhi

COURSE CODE BCA 106P

COURSE NAME: DATA STRUCTURES AND ALGORITHMS

LEARNING OBJECTIVES:

In this course, the learners will be able to develop expertise related to:

1. Implement various types of data structures using C
2. Implement different operations on linear and non-linear data structures

PRE-REQUISITES:

C Programming Skills

COURSE OUTCOMES (COs):

After completion of this course, the learners will be able to:

| CO # | Detailed Statement of the CO | BT Level | Mapping to PO # |
|------|--|----------|------------------------|
| CO1 | Implement basic operations on static linear data structures. | BTL3 | PO1, PO2,PO3, PO4 |
| CO2 | Implement various operations on dynamic linear data structures. | BTL6 | PO1, PO2,PO3, PO4,PO5 |
| CO3 | Implement basic operations on non-linear data structures | BTL3 | PO1, PO2,PO3, PO4, PO5 |
| CO4 | Implement searching techniques on linear and non-linear data structures. | BTL4 | PO1, PO2,PO3, PO4 |
| CO5 | Implement sorting techniques on one dimensional array. | BTL4 | PO1, PO2,PO3, PO4 |