Course Name: Data Structures, Year: II, Semester: IV

Semester	Course Code	Course Title	Hours	Credits
IV	C4	Data Structures	60	3

Course Objectives:

To introduce the fundamental concept of data structures and to emphasize the importance of data structures in developing and implementing efficient algorithms.

Course Outcomes:
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1. Describe how arrays, linked structures, stacks, queues, trees, and graphs are represented in memory and used by algorithms
2. Describe common applications for arrays, linked structures, stacks, queues, trees, and graphs.
3. Write programs that use arrays, linked structures, stacks, queues, trees, and graphs
4. Demonstrate different methods for traversing trees.
5. Compare alternative implementations of data structures with respect to performance
6. Compare and contrast the benefits of dynamic and static data structures implementations
7. Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack.
8. Discuss the computational efficiency of the principal algorithms for sorting, searching.