

Course Code	Course Name	Credit Hours	Prerequisite
204 CIS-3	Data Structures	3 (2,2)	CIS-2 111

### Course description:

This course is an introduction to the major topics related to Data Structures which emphasis on knowing the importance of data structures and its practical application. The course contains study of arrays, searching , sorting algorithm(Bubble, Quick, merge, Insertion and selection), Stack, queues, linked lists, recursive algorithms, trees , binary tree , tree traverse ,Graph theory and its implementation.

### Course objectives:

By The end of this course students should be able to:

- Detect Common Abstract Data Types(ADT's)
- Understand the basic data structures and concepts
- Study how to create and maintain various Data Structure
- Evaluate data structures and their advantages in real life
- Implement programs for data structures

### Text Book

- Seymour Lipschultz, Theory and Problems of Data Structure, (Shchaum's outline series)-2012,  
ISBN : 0-07-099130-8

### Reference

- Udit Agrawal, Data Structure Using C, S. K. Kataria & Sons-2012, ISBN : 9-35014056-X
- Narasimha Karumanchi, Data Structures And Algorithms Made Easy, Careermonk Publications-2011, ISBN : 1-45-654988-X

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