Course Instructor: Dr Chiranjib Sur

Course Webpage: https://chiranjibsuruf.github.io/courses/da111.html

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Objectives:

Prerequisites:

Course Code: DA111

Course Name: Algorithm Design & Analysis

Credits: 3-0-0-6

Syllabus: Asymptotic notation, space and time complexity; Sorting and order statistics - linear time sorting, quicksort; Searching; Design and analysis techniques - greedy method, divide-and-conquer, dynamic programming, amortized analysis; Graph algorithms - properties of BFS and DFS, connected components, topological sort, minimum spanning trees, shortest paths, max flow.

Textbooks:

- T. H. Cormen, C. E. Leiserson, R. L. Rivest, and C. Stein, Introduction to Algorithms, Prentice-Hall of India, 2009.

- A. V. Aho, J. E. Hopcroft, and J. D. Ullman, The Design and Analysis of Computer Algorithms, Pearson Education, 2006..

References:

- To be updated.