COURSE DETAIL

DESIGN AND ANALYSIS OF ALGORITHMS
Country China
Host Institution Fudan University
Program(s) Fudan University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Computer Science
UCEAP Course Number 121
UCEAP Course Suffix
UCEAP Official Title DESIGN AND ANALYSIS OF ALGORITHMS
UCEAP Transcript Title DES & ANLY: ALGORTH
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description

This course is designed to provide a comprehensive introduction to the modern study of computer algorithms. It presents many algorithms and covers them in considerable depth. Each chapter presents an algorithm, a design technique, an application area or a related topic. Since we emphasize efficiency as a design criterion, we include careful analyses of the running time of all our algorithms. In addition to the introduction of “design of algorithms”, we also play the emphasis on the “complexity analysis of algorithms” to help students understand the detailed differences between various algorithms for a certain problem mainly in terms of time. The carefully chosen English material is intended to provide the students an enjoyable taste for the international class on algorithms. The textbook we chose is also used by many other universities for undergraduate algorithm course. The course targets the enhancement of the following skills: 1)understanding and mastering the fundamental algorithm design by a series representative algorithms such as: graph algorithms, sorting algorithms etc.; 2) training the capability of algorithms analysis as well the proof of the correctness of algorithms in terms of time complexity and asymptotic efficiency, improving the logic reasoning and understanding the development of algorithm theory; 3) encouraging students to have a depth understanding of studied algorithm by applying them to practical applications as well as problems, training them to relate what they have learned in the class to the real-world problems.4) improving the capability of solving real-world problems.

Language(s) of Instruction
English

Host Institution Course Number
COMP130011

Host Institution Course Title
DESIGN AND ANALYSIS OF ALGORITHMS

Host Institution Course Details

Host Institution Campus
Host Institution Faculty
Host Institution Degree
Host Institution Department
Course Last Reviewed 2023-2024

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