Syllabus for Design and Analysis of Computer Algorithms

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Textbooks : T.H. Corman, C.E. Leiserson, R.L. Rivest and C. Stein: **Introduction to Algorithms (3rd edition)**, MIT Press.

Topics : Through study on a typical problem, learn important teniques in Design and Analysis of Algorithms. The course is divided into six parts as follows:

Part 1: Algorithms with Self-reduction:
(1) Sorting and Divide-and-Conque; (2) Shortest Path and Dynamic Programming;
(3) Spanning tree and Greedy Algorithm.
Part 2: Incremental Methods:
(4) Network Flow and Augmenting Path, Linear Programming.
Part 3: Computational Complexity:
(5) NP-class and NP-hard problems.

Assignments : There will be five assignments. Each assignment will be given through "elearning". **No late assignment will be accepted**.

Pop Quizes : Some "Pop Quize" may be given in class **WITHOUT ANNOUNCEMENT**.

Examinations : There will be two examinations. They are all in class (close books and close notes). Dates will be informed in class homepage.

Weights of Assignments and Exams : Each Assignment 5%; each Pop Quiz 3%; Midterm Exam 25%; Final Exam 35Grades will be assigned according to the total points as follows: $A \geq 85 > B \geq 70 > C \geq 50$.

Futher information can be found from utdallas.edu/ dxd056000/
click "course information"
click course code (e.g., cs4349 or cs6363).