COT 4400 - The Design and Analysis of Algorithms

- **Catalog Description:**

  Prerequisite: Some background on data structures and a high-level programming language. If you do not have a passing grade in COP3530 (or its equivalent at another university), you cannot take this course.

- **Textbooks:**

  1. *Introduction to Algorithms*
     

- **Reference book:**


- **Instructor:**

  Dr. Jie Wu, Professor of Computer Science and Engineering
  jie@cse.fau.edu, http://www.cse.fau.edu/~jie

- **Goals:** An overview of methods to design and analyze algorithms.

- **Class time:** T-TH 3:30 PM - 5:10 PM

- **Office hours:** T-TH 10:00 - 12:00 PM, 1:00 - 2:00 PM S&E 410

- **Prerequisite by topic:**

  1. Good overall understanding of discrete mathematics
  2. Basics of data structures
  3. Familiar with C or C++

- **Topics:**

  3. Data structure: basic data structures, hash tables, binary search trees.
  5. Greedy algorithms: action-selection problem and Huffman codes.
  6. Graph algorithms: representation, traversal techniques, minimum spanning tree, shortest path algorithms.