

# CSC 382 Analysis of Algorithms

## Syllabus

### Meeting Information

- **Days, Times, & Room:** Tu Th 10:10 AM – 12:05 PM @ 1N 111
- **Homepage:** <https://www.cs.csi.cuny.edu/~chen/382>
- **Instructor:** Cong Chen (cong.chen@csi.cuny.edu)
- **Office Hours:** Mo 5:25 PM – 6:25 PM @ 4N 206

### Textbook

- Introduction to algorithms
- Artificial Intelligence: A Modern Approach

### Grading Policy

- **Attendance & Participation:** 1 point each
- **Quizzes & Homework:** 40 points
- **4 Exams:** 20 points each
- **Grades:**
  - A: more than 89 points;
  - B: 80 to 89 points;
  - C: 70 to 79 points;
  - D: 60 to 69 points;
  - F: fewer than 60 points

## Topics

- **Easy Problems (Warm-up):** Iteration, Recursion, Arrays, Binary Search
- **Data Structures (Reviews):** Dynamic Arrays, Linked Lists, Hash Tables, Binary Search Trees, Complexity, Big-O Notation, Bubble/Insertion/Selection Sort, Heap Sort, Priority Queues

— Exam I —

- **Sorting and Order Statistics:** Divide and Conquer, Merge Sort, Quick Sort, Counting Sort, Medians and Order Statistics
- **Probabilistic Analysis**
- **Dynamic Programming**
- **Greedy algorithms**

— Exam II —

- **Graph Search:** Representation, Minimum Spanning Trees, DFS, BFS, Dijkstra, Connectivity, Topological Sort
- **Hueristic Search:** A\*, BFBnB

— Exam III —

- **Final Reviews**

— Exam IV —