

Course Goals

- Learn methods and principles to construct algorithms.
- Learn techniques to analyze algorithms mathematically for correctness and efficiency (e.g., running time and space used).
- Course roughly follows the topics suggested in textbook
 - ▶ Stable matching
 - ▶ Measures of algorithm complexity
 - ▶ Graphs (may skip)
 - ▶ Greedy algorithms
 - ▶ Divide and conquer (briefly)
 - ▶ Dynamic programming
 - ▶ Network flow problems
 - ▶ NP-completeness
 - ▶ Coping with intractability
 - ▶ Approximation algorithms
 - ▶ Randomized algorithms (if there is time)