MIT Open Course Lectures on Algorithms

<https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-046j-design-and-analysis-of-algorithms-spring-2015/lecture-videos/>

**Running Time Analysis**

Lecture 5 from the MIT course

<https://rob-bell.net/2009/06/a-beginners-guide-to-big-o-notation/>

<https://www.geeksforgeeks.org/analysis-algorithms-big-o-analysis/>

**Algorithm Pseudocode Examples**

http://www.unf.edu/~broggio/cop2221/2221pseu.htm

**Greedy Algorithm**

Lecture 12 from the MIT course

<https://www.coursera.org/learn/algorithms-greedy/lecture/WHe2b/introduction-to-greedy-algorithms>

(This lecture mentions divide-and-conquer, randomized algorithms, and dynamic programming – I doubt we will use these techniques but they are nice to see if you have extra time)

**Iterative Improvements: Local search**

<https://www.youtube.com/watch?v=NPA6jEWrY90> (not the best but I couldn’t find a better resource)

More difficult example of iterative improvements: Lecture 13 from the MIT course

**Iterative Improvements: matching algorithm**

Lecture 14 from the MIT course

**Linear programming and integer programming**

See pdfs in folder

**More advanced: Simulated Annealing, Genetic Algorithms**

<https://www.ida.liu.se/~zebpe83/heuristic/>