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| CONCEPTS | |

- ✓ 1. Course Introduction
- ✓ 2. Course Outline
- ★ 3. Course Expectations
- 4. Syntax
- ★ 5. Python Practice
- ★ 6. Python: The Basics
- 7. Efficiency
- 8. Notation Intro
- 9. Notation Continued
- 10. Worst Case and Approximation
- ★ 11. Efficiency Practice

I hope you're ready to get started! Below is the outline for this course—each section is a mix of videos, text explanations, Python examples, and practice questions. The information is each bit of information interesting and digestible. Feel free to post in the forums!

1. Introduction and Efficiency

- Course Introduction
- Syntax
- Efficiency
- Notation of Efficiency

2. List-Based Collections

- Lists/Arrays
- Linked Lists
- Stacks
- Queues

3. Searching and Sorting

- Binary Search
- Recursion
- Bubble Sort
- Merge Sort
- Quick Sort

4. Maps and Hashing

- Maps
- Hashing
- Collisions
- Hashing Conventions

5. Trees

- Trees
- Tree Traversal
- Binary Trees
- Binary Search Trees
- Heaps
- Self-Balancing Trees

6. Graphs

- Graphs
- Graph Properties
- Graph Representation
- Graph Traversal
- Graph Paths

7. Case Studies in Algorithms

- Shortest Path Problem
- Knapsack Problem
- Traveling Salesman Problem

8. Technical Interview Tips

- Mock Interview Breakdown
- Additional Tips
- Practice with Pramp
- Next Steps