

Design, Analysis and Implementation of Algorithms

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Introduction



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 - ▶ **Objectives of the course**
 - ★ Skills: Design, analysis and implementation of algorithms

- Basic

- ▶ Chapter 1: Introduction to algorithms and data structures (weeks 1-2)
- ▶ Chapter 2: Recursive algorithms (weeks 3-5)
- ▶ Chapter 3: Greedy algorithms (weeks 6)
- ▶ Chapter 4: Divide-and-Conquer (week 7)
- ▶ Chapter 5: Dynamic Programming (weeks 8-9)
- ▶ Chapter 6: Graph algorithms and applications (weeks 10-11)

- Advances

- ▶ Chapter 7: Advanced data structures and applications (weeks 12-13)
- ▶ Chapter 8: Algorithms on Strings and applications (week 14-15)

- ① T.H. Cormen, C.E. Leiserson, R.L. Rivest, C. Stein. Introduction to Algorithms. Second Edition, MIT Press, 2001
- ② Robert Lafore. Data structures and Algorithms in Java (2nd Edition) Sams Publishing, 2002