# Design and Analysis of Algorithms

# Teaching Plan

- Part I:  Foundations
  - Growth of Function,  Divide-and-Conquer
  - important in the analysis part
- Part II:  Sorting (self-learning)& Order Statistics
- Part IV:  Advanced Design and Analysis Techniques
  - Dynamic Programming
  - Greedy Algorithms
  - Amortized Analysis

# Teaching Plan

- Part VI:  Graph Algorithms
  - Minimum Spanning Tree
  - Shortest Path
- Part VII:  Selected Topics
  - NP-Completeness
  - Approximation Algorithms

# Textbook & References

- Textbook:
  - Introduction to Algorithms (Fourth Edition), by Cormen et al.
- References
  - Introduction to Design and Analysis of Algorithms, by C. T. Lee et al.
  - Algorithms in C++, by Sedgewick
  - Foundations of Algorithms, by Neapolitan & Naimipour

# Assessment

- 點名或隨堂考 ~ 5%
- 小考: ~ 30%
- 期中考: ~ 30%
- 期末考: ~ 35%

上述配分比例僅供參考

# 課堂注意事項

- 修習此們課需會寫遞迴(Recursive)程式及修過資料結構。
- 上課期間請勿有任意走動、講話、睡覺、上網或干擾他人之行為。
- 請勿攜帶有強烈味道之飲食到課堂上食用。
- 上課期間有任何問題可以隨時發問，下課時亦可發問，但鼓勵大家盡量在上課時發問。
- 課堂投影片會請助教將去年投影片先放上，若有更新會在上課後更新完畢。
- 上課前先預習、課後複習會獲得最有效率的學習成效。

# 考試注意事項

- 任何考試除隨堂考外，身上禁止攜帶手機及小抄。
- 考試舞弊者該次考試以零分計算，並按校規處理。
- 請不要隨意二退，浪費學習資源。

# Websites

- Course Website:
  - Elearn
- Teaching assistant E-mail: timjackduncan@gmail.com