CMSC 451

Design and Analysis of Computer Algorithms

Spring 2020

Administration

Kusal De Alwis <kdealwis@terpmail.umd.edu>

Administration (continued)

- Webpage
  - Get homework assignments
  - Syllabus
  - Other documents

- Piazza
  - Ask questions
    - Do **not** post solutions.
    - Do **not** ask if your answer or approach is correct.
  - Discuss issues
  - Public versus Private

- ELMS
  - Get homework solutions
  - See final grades

- Gradescope
  - Hand in homework
  - See graded homeworks and exams

Administration (continued)

- Textbook
  - *Algorithm Design*, Kleinberg and Tardos, 2006, Pearson.
- Class attendance
  - You are responsible for what is said in class.
  - Laptops and other devices: Do not share during class.
  - Lectures will be posted (mostly).

- Office hours
- Exams
  - One evening midterm: **6:00-8:00pm**.
    - ★ Tuesday, March 24
  - Final exam: **1:30-3:30pm**.
    - ★ Tuesday, May 19th

Administration (continued)

- Homework
  - Two types
    - ★ Regular: typically due every other Friday (or so). (2-3% each)
    - ★ NP-completeness: typically due every other Wednesday. (1/2% each)
  - Must be in PDF.
  - Must be easy to read (your responsibility).
  - Late date: 25% off your actual grade.
    - ★ One get-out-of-jail-free card for each type.
  - Your neighbor should understand your answers.
  - Study groups. (Teach it.)
  - Must write up homework solutions yourself.
    - ★ State who is in your study group at top of homework.
    - ★ State what outside resources you used to solve each problem.
  - Do problems from book (and other books).

- Grading

Topics (tentative)

- Introduction (Ch. 1)
- Graphs (Ch. 3)
- Greedy Algorithms (Ch. 4)
- Divide and Conquer (Ch. 5)
- Dynamic Programming (Ch. 6)
- Network Flow (Ch. 7) [Maybe]
- NP-Completeness (Ch. 8)
- Approximation Algorithms (Ch. 11)