COURSE INFORMATION

EECS 2011 – Section Z

http://www.eecs.yorku.ca/course/2011Z

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INSTRUCTOR

Uyen Trang (U.T.) Nguyen

Office: LAS-2024

Email: utn@eecs.yorku.ca

Office hours:
Tuesday, 10:00-11:00
Thursday, 15:00-16:00
By appointment in special cases
Note: Check course web site before coming to office hours
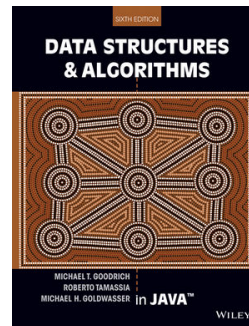
Teaching assistants: TBA

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TEXTBOOK

Data Structures and Algorithms in Java (6th edition)

by M. T. Goodrich, R. Tamassia and H. Goldwasser

John Wiley and Sons, 2014

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GRADING SCHEME

15% – 4 to 5 assignments

30% – Midterm

55% – Final exam

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TEST AND EXAM POLICY

- You are allowed to miss a test/exam only under extraordinary circumstances.

- If the reason is illness, your doctor must complete the Attending Physician's Statement form.

- There is **no** make up test. The weight of a missed test will be transferred to the final exam.

- All assignments, test and exam are individual work.

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ASSIGNMENTS

- All assignments will be submitted electronically using the "submit" command.
- We do not accept late submissions.
- You may submit a file several times. Submit your work gradually before the deadline to avoid last-minute problems.
- Report an error in your mark or request a re-marking within 2 weeks after an assignment is returned.
- We use MOSS to detect software plagiarism.

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USEFUL SUGGESTIONS

- When sending emails to the instructor or TAs, please indicate "EECS 2011" in the subject line (e.g., "EECS 2011 - Lecture notes unreadable").

- For questions related to course materials, it is best to come to the office/TA hours. Email is not an effective or time-efficient way to explain the materials.

- Read the lecture notes and the textbook before and again right after each lecture.

- Work on suggested homework problems.

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ETIQUETTES

- Be on time.
- Turn off cell phones while in class.
- Do not talk to your neighbors during lectures. You may be asked to leave the classroom if your conversation is disruptive.
- If you have questions, feel free to ask the instructor in class or after the lecture.

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ABOUT THIS COURSE

- EECS 10xx: students are <u>clients</u> who use a given API (reading API specs, creating programs that use them).

- EECS 1030/2030: students are asked to <u>implement</u> a given API.

- EECS 2011: students are asked to <u>design</u> and build an API.
  - "Build" = coding and testing thoroughly

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WHAT WILL WE LEARN?

- Data structures
  - Organizing and storing data
  - Manipulating data
    - Examples: arrays, lists, stacks, queues, hash tables, heaps, trees, graphs

- Algorithms
  - Step-by-step procedure for performing specific task
    - Examples: sorting, searching, insertion, deletion

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COURSE OUTLINE

- Analysis tools and basic techniques
  - Running time calculations
  - Growth rates
  - Asymptotic notations: O, Ω, Θ, o
  - Recursion
  - Divide and conquer approach
- Sorting
  - Selection sort
  - Merge sort
  - Quick sort

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COURSE OUTLINE (2)

- Linear structures
  - Arrays vs. linked lists
  - Stacks
  - Queues
  - Double-ended queues

- Trees
  - Binary trees
  - Binary search trees
  - AVL trees
  - Heaps
- Hash tables
- Graphs
  - Depth first search
  - Breadth first search

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HOMEWORK

- Read all the pages and links on the course web site.

  http://www.eecs.yorku.ca/course/2011Z

- Read chapters 1 and 2 to review Java.

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Questions?

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