

# Cmpe 250 - Introduction

September 27, 2023

# Team

## Instructor

Atay Özgövde (ozgovde@boun.edu.tr)

## Teaching Assistant

Suzan Ece Ada (ece.ada@boun.edu.tr)

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## Students

~120 motivated students

## Time and Location

**Class Hours:** W5 [13:00-13:50]; ThTh56 [13:00-14:50]

**PS Hours:** MM78 [15:00-16:50]

# Course Website

[moodle.boun.edu.tr](http://moodle.boun.edu.tr)

- We plan to have all course related activities and communication over the **Moodle** website.
- Course should already be visible to you, login and enjoy!
- Make sure you check out moodle announcements.

# Course Goal

This course is designed to teach specification, usage, implementation, and analysis of advanced data structures and algorithms using Java programming language.

# Course Content

- ① Introduction
- ② Basic data structures
- ③ Introduction to algorithm analysis
- ④ Hashing
- ⑤ Priority queues
- ⑥ Sorting
- ⑦ Graph basics & directed acyclic graphs (Topological Sort)
- ⑧ Traversing & searching on graphs
- ⑨ Spanning trees
- ⑩ Network flows
- ⑪ Algorithm design techniques

# Textbook

M. A. Weiss, Data Structures and Algorithm Analysis in Java, Pearson, 3rd Edition

\* Note that you will be responsible for the subjects covered in the lectures.

# Evaluation

- 20% - 1 Midterm Exam
- 5% - 2 Quizzes
- 45% - 4 Projects
- 30% - Final Exam

A change of +- 5% may occur in the basis of evaluation!

**Important:** Projects and homeworks assigned in this course are essential for passing the course. If you fail to submit on time, you will also fail the course!

## Exam Style

Midterm, quizzes and final exam will be in the class.

# Submission Policy - VERY IMPORTANT!

- Project submissions are always on Moodle, never send it as an email attachment, or in any other form.
- Submission time on Moodle server is the only official submission time.
- In terms of grading: 1 minute late submission = 2 days late submission
- No submission is allowed after 48 hours

**Important:** To be on the safe side, we strongly encourage you to submit your projects at least 2 hours before the deadline and double-check yourself its submission time.

## Late Submission

If you submit up to 48 hours late, your grade will be multiplied by 0.7

# Cheating & Plagiarism

- **Copying or allowing someone to copy your work** on an exam, homework, or in class assignment is cheating.
- **Copying and pasting** material from the **web** or **any other electronic source** is plagiarism.
- Copying and turning in the same assignment as someone else, from this class or from another class, is cheating. Unless explicitly told otherwise, you can discuss a problem and solve on homework together, but the final product has to be your own – must have your own way of explanation.

# Cheating & Plagiarism

- Making superficial changes (minor additions, deletions, word changes, tense changes, etc) to material obtained from another person, the web, a book, magazine, song, etc. and not citing the work, is plagiarism. The idea is the intellectual property, not the specific format in which it appears.
- If you find material and it is exactly what you are trying to say, or you want to discuss someone's idea, give the person credit and cite it appropriately. Don't overuse citations and quotes: instructors want to know how you think and reason, not how someone else does.
- If you have any questions or concerns about whether your behavior could be interpreted as plagiarism, please consult with me before you submit the work.
- There are serious **consequences** for cheating behavior: failing all of the courses in the current term, not giving reference letter (not only me), not accepting for M.Sc. etc.

# Motivation

- Amplifying intellectual abilities; \*
  - Language
  - Writing
  - Computing

The first key intellect amplifier was language. Language provided the ability to transmit our thoughts to others, as well as to use our own minds more effectively. The next key intellect amplifier was writing, which enabled the storage and transmission of thoughts over time and distance. Computing is the ultimate mental amplifier that changed our way of solving problems.

- Data Structures and Algorithms;
  - To solve challenging real world problems of today and tomorrow you will need advanced algorithms and data structures

# What is CMPE is about?

