# CENG 213
# Data Structures
# (Section 1)

## Introduction

# Staff

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**Teaching Assistants:**

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# Course Goals

At the end of this class, you should be able to…

- Implement your own data structures
- Figure out which data structure AND implementation is best to solve a problem
- Evaluate the efficiency of your programs

- **Prerequisite**: CENG 140

# Course Format (Section1)

**Live Sessions:**

- Wednesday 15:40 -16:30 (odtuclass)
- Thursday 15:40 -17:30 (odtuclass)

**Course web page:** http://odtuclass.metu.edu.tr

**Office hour:**

To be announced.

# Textbook and references

1. Mark Allen Weiss, Data Structures and Algorithm Analysis in C++ (3rd ed.), Addison Wesley, 2006 (*Current Textbook*).
2. *C++ Primer ,* S.B. Lippman, J.Lajoie, B. Moo, Pearson Education, 2010
3. *Programming: Principles and Practice Using C++* , Bjarne Stroustrup, 2nd Edition - May 25, 2014
4. The C++ Tutorial: http://www.learncpp.com
5. http://www.cplusplus.com/

# Grading

- Midterm: 25%
- Final Exam: 30%
- Programming Assignments: 25%
- Lab and online exercises: 15%
- Participation in class: 5%

# Policies

- Policy on missed midterm:
  - There will be a make-up exam in the week following the period for your legal excuse.
- Lateness policy:
  - Each student receives 5 late days for the entire semester. You may use late days on any programming assignment. However no assignment may be submitted more than 3 days.
  - Once a student has used up all their late days, each successive day that an assignment is late will result in a loss of 5% on that assignment
- All assignments and programs are to be your own work. No group projects or assignments are allowed.

# Course Outline

- Overview of object-oriented programming with C++ [chapter 1]
- Algorithm analysis [chapter 2]
- Lists, stacks, queues [chapter 3]
- Trees [chapter 4]
- Priority queues [chapter 6]
- Hashing [chapter 5]
- Graphs [chapter 9]
- Sorting [chapter 7]