

Syllabus for  
swe510 Data Structures and Algorithms

(3+0+0) 3 ECTS 8

2019 Fall

## Catalog Definition

Specification, usage and implementation and analysis of advanced data structures and algorithms. Hashing, heap structures, advanced sorting techniques, graphs and algorithm design techniques.

## Web Site

<http://www.cmpe.boun.edu.tr/tr/courses/swe510>.

## General Information

Instructor	Haluk O. Bingol, bingol@boun.edu.tr
TA	none
Student TA	none
Course Schedule	WWW 111213 @ BM A2, BM A2, BM A2,
PS Schedule	none

## Grading

Contribution	10 %
Midterm 1	25 %
Midterm 2	30 %
Final	35 %
Presentations	as bonus

Exams are on computer using teaching.codes..

## Textbook

- Cormen, Leiserson, Rivest, Stein, Introduction to Algorithms, 3e, Addison-Wesley 2009

## Reference Books

- Algorithms (4th Edition); Robert Sedgewick and Kevin Wayne; *Addison-Wesley*, 2011, [QA76.9.A43 S429 2011]

- Data structures and algorithms with object-oriented design patterns in Java; Bruno R. Preiss; *John Wiley*, 2000, [QA76.64 .P744 2000]
- Data structures and algorithm analysis in Java; Weiss, Mark Allen; *Addison-Wesley*, 1999. [QA76.73.J38 W431 1999]
- The art of computer programming, Vols: 1, 2, 3; Donald E. Knuth; *Addison-Wesley*, 1973. [QA76.6 .K64 1973]

## Weekly Program (Tentative)

<b>week</b>	<b>Subject</b>
1-2	Eclipse, Java, Arrays, Objects, Stack, Queue
3-4	Hashing
5-6	Heap
7	mt1
8-9	Sorting
10	mt2
11-12	Graphs