

ALGORITHM DESIGN AND ANALYSIS COURSE INFORMATION

Course Name: Algorithm Design and Analysis (see web page: Teaching Link from my personal web page www.orhandagdeviren.com)

Instructor: Assist. Prof. Dr. Orhan Dagdeviren (see web page for instructor information)

Assistant: Res. Ass. Murat Kurt (e-mail:murat.kurt@ege.edu.tr, web page: <http://ube.ege.edu.tr/~kurt/>)

Aim and Content:

The aim of this course is to investigate theoretic analysis and methods of known algorithms and data structures, and have wide knowledge about algorithm design and analysis.

Course Book: Introduction to algorithms, T.H. Cormen, C. E. Leiserson, R.L. Rivest, and C. Stein, McGraw-Hill , 2001.

Supplementary Materials (Not Full List):

1. Anany Levitin, Introduction to the Design and Analysis of Algorithms, Pearson.

List of Topics:

1. Introduction to Algorithms
2. Recurrences
3. Quicksort
4. Heapsort
5. Linear time sorting
6. Hash Tables
7. Binary Trees, Red Black Trees
8. Graphs
9. Dynamic Programming
10. Greedy Algorithms
11. Matrices

Tentative Grading:

Midterm: 30 %

Homeworks (5 homeworks): 30 %

Final Project: 40 %

If a student requests, average grade of the midterm and homeworks will be replaced with the grade of the complementary exam.

Attendance.