## UBI 534 COURSE INFORMATION

**Course Name:** UBI 534- Fundamental Algorithmic Techniques
**Instructor:** Assist. Prof. Dr. Orhan Dagdeviren

*Aim and Content:*
The aim of this course is to investigate theoretic analysis and methods of known algoritms 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.

*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. Dynammic Programming
10. Greedy Algorithms
11. Matrices

*Tentative Grading:*
Midterm:25 %
Final: 30 %
Homeworks (5-6): 25 %
Project-Presentation: 20 %

*Supplementary Metarials (Not Full List):*

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