

BMUH 519 Algorithm Analysis

Course Code:	BMUH 519
UTAA Credit (Theoretical-Laboratory hours/week):	3(3-0)
ECTS Credit:	6.0
Department:	Electrical and Computer Engineering
Language of Instruction:	English
Level of Study:	Graduate
Offered Semester:	Fall and Spring Semesters.

Course Objectives

This introductory course acts as means to analyze and design computer algorithms. Techniques related to the design and analysis of efficient algorithms are taught, emphasizing their practical applications.

Course Content

Problem solving techniques, fundamental engineering algorithms, complexity analysis using asymptotic notations, dynamic programming, greedy algorithms, amortized algorithms, graph algorithms

Course Learning Outcomes

- 1-Analyze the performance of algorithms
- 2-Gain familiarity with basic algorithms and data structures
- 3-Model and analyze algorithms via using important algorithmic design paradigms and analysis methods
- 4-Explore the foundations of efficient algorithms in general engineering design problems