BMUH 575 Advanced Data Science

Course Code:	BMUH 575
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

To let students internalize usages of subjects such as data manipulation, statistics, machine learning in contemporary data science. Students should be able to acquire skills such as processing of data gathered for a scientific research by using a computer and analyze this data after deciding on the suitable analysis technique as well as interpret the results.

Course Content

Analytical concepts, estimation models, machine learning and model placement which constitute the basis of data science are going to be explored mathematically and with their applications. Principles of statistics, data and kinds of data, importance of applying statistics on scientific studies, data gathering and analysis, descriptive statistics over a commonly used statistics bundle software and application of inference statistics, their interpretation and use in preparing reports, examination of regression; performing, interpretation of correlational analyses and their results.

Course Learning Outcomes

1-Gain information pertaining to methods in the fields of Data Science and Big Data Analysis

2-Model and solve practical problems using approaches belonging to Data Science and Big Data Analysis

3-Design experiments, conduct experiments, gather data, analyze and interpret the results in order to examine problems of Data Science and Big Data Analysis and research subjects unique to the discipline

4-Have adequate information in order to implement various applications of the graphical representation of data and its analytics