



AVRUPA KREDİ TRANSFER SİSTEMİ (AKTS)

Ders Bilgi Paketi

BUSI 358 – İşletmelerde Veri Bilimi

Ders Bilgileri

Ders Kodu	BUSI 358
Dersin Adı	İşletmelerde Veri Bilimi
Ders Adı (EN)	Data Science in Business
Eğitim Düzeyi	Lisans
Ders Türü	Ders
Eğitim Dili	İngilizce
Öğretim Elemanı	Doç. Dr. Abubakar Mohammed ABUBAKAR
T / U / L	3 / 0 / 0
Kredi	3
AKTS	5

Dersin Amacı

Data Science is a rapidly growing field focused on leveraging data to enhance business decisionmaking. With advancements in technology, businesses generate vast amounts of real-time, diverse data (Big Data), creating a high demand for professionals skilled in managing and analyzing this information. This course provides students with both theoretical foundations and practical applications of data science, emphasizing how data-driven insights can improve business performance. Students will explore methods to transform large volumes of business data into actionable insights, fostering value creation within the business ecosystem. Hands-on experience with popular analytical tools like Tableau, QlikView, and Datapine will enable students to analyze, visualize, and present data effectively. Upon completion of this course, students will:

- Gain an understanding of the foundations of data science and its applications
- Understand how data science processes can be used to solve business problems
- Understand concepts for extracting knowledge from data and value of data analytics
- Understand and gain hands-on experience using analytics tools for data design, extraction, formatting, analysis, visualization and

interpretation □ Gain awareness of data ethics considerations

Dersin İçeriği

Hafta / Week 1 Introduction to Data Science-Overview of Data Science and its relevance in modern business-Key roles in data science (e.g., data scientists, data analysts)Hafta / Week 2 Data and Data Science Capability as a Strategic Asset-Overview of Big Data and its importance in business-The role of data-driven decision-making in organizations-Types of business data: structured, unstructured, and semi-structured dataHafta / Week 3 Data Analytics Techniques-Introduction to analytical techniques-Data warehousing and data lakesHafta / Week 4 Data Preparation & Manipulation-Introduction to RDBMS-Introduction to SQLHafta / Week 5 Data Cleaning and Integration-Data quality and preprocessing: handling missing values, outliers, and noisy data-Introduction to ETL (Extract, Transform, Load) processesHafta / Week 6 Machine Learning-Key machine learning techniques for business (regression, classification, clustering)-Supervised vs. unsupervised learning-Data privacy laws (GDPR, CCPA) and their impact on data collection-Ethical challenges in data analysis: bias, fairness, and transparencyHafta / Week 7 Data Visualization and Data Ethics-Importance of data visualization in decision-making, popular visualization tools and their features-Ethical challenges in data analysis: bias, fairness, and transparency-Responsible data use and fairness in algorithmsÖğrenme Çıktıları / Key learning OutcomesUpon completion of this course, students will:□ Gain an understanding of the foundations of data science and its applications□ Understand how data science processes can be used to solve business problems□ Understand concepts for extracting knowledge from data and value of data analytics□ Understand and gain hands-on experience using analytics tools for data design, extraction, formatting, analysis, visualization and interpretation□ Gain awareness of data ethics considerationsDers Kitabı / Text BookDersle ilgili tüm bilgiler ve ders materyalleri dersin sitesinde bulunacaktır / Course related materials will be posted on the course web site.Hafta / Week 8 Ara Sınav / Midterm ExamHafta / Week 9 Practice with Tableau 0-Overview of Tableau Desktop: interface, functionalities, and data connections-Connecting Tableau to data sources (Excel, databases, cloud)-SQLHafta / Week 10 Practice with Tableau 1- SQL- ASSIGNMENT 1Hafta / Week 11 Practice with Tableau 2-SQL-Basic chart types and creating your first Tableau dashboard- ASSIGNMENT 2Hafta / Week 12 Practice with Tableau 3-Data preparation in Tableau: filtering, sorting, and grouping-Handling missing data and creating calculated fields-Merging and blending multiple datasets- ASSIGNMENT 3Hafta / Week 13 Practice with Tableau 4-Creating effective visualizations: bar charts, line graphs, scatter plots, and heat maps-Using color, size, and shape to emphasize insights-Building interactive dashboards and adding filters- ASSIGNMENT 4Hafta / Week 14 Practice with Tableau 5-Using advanced analytics features: parameters, trend lines, and forecasting.-Working with geographic data: creating maps in Tableau- ASSIGNMENT 5Hafta / Week 15 Practice with Tableau 6-Hands-on data analysis project-Students will present their final Tableau dashboards and insights

Dersin Ön Koşulu/ Yan Koşulu

None. But having taken these courses will be an added advantage: MATH 204-Statistics for Social Science BUSI231-Introduction to Marketing and BUSI252-Introduction to Management Science

Ders Kitabı / Malzemesi / Önerilen Kaynaklar

Dersle ilgili tüm bilgiler ve ders materyalleri dersin sitesinde bulunacaktır / Course related materials will be posted on the course web site.

Akademik Dürüstlük ve Yapay Zeka

Plagiarism will not be tolerated under any circumstances. No late submissions will be accepted, except in very rare cases (e.g., illness with medical report, legal etc.). Students who are absent on an exam day must provide a legitimate excuse before the exam. Failure to do so will result in a penalty of a grade of 0. Any form of academic dishonesty (e.g., plagiarism, intellectual property theft – including materials taken from the Internet, having others do your assignments, failing to participate in group work, etc.) will result in a penalty. Students are expected to uphold the highest standards of academic integrity when using artificial intelligence (AI) tools. While AI resources may be used to support learning, all submitted work must reflect the student's own understanding and effort. Unauthorized use of AI to generate or complete assignments, or failure to properly acknowledge such use when permitted, constitutes academic misconduct.

Ders Çıktıları

L01: Gain an understanding of the foundations of data science and its applications

L02: Understand how data science processes can be used to solve business problems

L03: Understand concepts for extracting knowledge from data and value of data analytics

L04: Understand and gain hands-on experience using analytics tools for data design, extraction, formatting, analysis, visualization and interpretation

L05: Gain awareness of data ethics considerations

Haftalık Program

Bu ders için haftalık program bilgisi bulunmamaktadır.

Eğitim-Öğretim Metodları

Bu ders için eğitim-öğretim yöntemi bilgisi bulunmamaktadır.

Ders Değerlendirme Kriterleri

Aktivite Türü	Değerlendirme Adı	Katkı Oranı
Vize	Midterm Exam	%30
Ödev	All individual dashboard project and assignments	%30
Quiz	Quizzes	%15
Proje	Final Group Project	%25
Toplam		%100

Sürdürülebilir Kalkınma Amaçları

Seçilen Amaçlar: SKA 1, SKA 3, SKA 4, SKA 5, SKA 8, SKA 9, SKA 10, SKA 11, SKA 12, SKA 16, SKA 17

Bu belge 22.07.2026 tarihinde otomatik olarak oluşturulmuştur.