

Ders Kodu Dersin Adı Yarıyıl Teori Uygulama Lab Kredisi AKTS

G318 İş Analitiği 8 3 0 0 3 5

Ön Koşul

Derse Kabul Koşulları

Dersin Dili İngilizce

Türü Seçmeli

Dersin Düzeyi Lisans

Dersin Amacı

The aim of this course is to equip students with the analytical skills required to make data-driven decisions in business environments. The course introduces key concepts in data science, including descriptive, predictive, and prescriptive analytics, alongside optimization techniques and big data technologies. By integrating real-world examples, business tools, and ethical considerations, the course aims to build analytical literacy and foster strategic thinking in the age of digital transformation.

Week 1 Review on Data and Business Data and AI

Week 2 Introduction to Business Analytics and Data Ethics and Assignments of Semester-Beginning Presentations

Week 3 Presentation of Semester-Beginning Assignments – Introduction to Excel and Descriptive Analytics (1)

Week 4 Descriptive Analytics and Applications (2)

Week 5 Predictive Analytics (1)

Week 6 Predictive Analytics and Applications (2): Using AI for predictive Analytics

Week 7 Wrap-up for midterm exam and Case Studies

Week 8 MIDTERM EXAM (Final Project Topics will be provided)

Week 9 Prescriptive Analytics (1)

Week 10 Prescriptive Analytics and Applications (2)

Week 11 Linear Optimization and Decision Analysis

Week 12 Nonlinear Optimization and Decision Analysis

Week 13 Big Data Technologies and Analytics /course wrap-up and Case Studies

Week 14 Final Project Presentations

Camm, J. D., Cochran, J. J., Fry, M. J., & Ohlmann, J. W. (2024). Business analytics: Descriptive, predictive, prescriptive. Cengage Learning.

Provost, Foster, and Tom Fawcett. Data Science for Business: What You Need to Know About Data Mining and Data-Analytic Thinking. O'Reilly Media, 2013.

Mayer-Schönberger, Viktor, and Kenneth Cukier. Big Data: A Revolution That Will Transform How We Live, Work, and Think. Houghton Mifflin Harcourt, 2013.

İçerik

Kaynaklar

Readings and case studies will be provided throughout the course. The beginning and end-of-semester assignments are mandatory and must be completed to pass the course.

Teori Konu Başlıkları**Hafta****Konu Başlıkları**

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- 2 Introduction to Business Analytics and Data Ethics and Assignments of Semester-Beginning Presentations
- 3 Presentation of Semester-Beginning Assignments – Introduction to Excel and Descriptive Analytics (1)
- 4 Descriptive Analytics and Applications (2)
- 5 Predictive Analytics (1)
- 6 Predictive Analytics and Applications (2): Using AI for predictive Analytics
- 7 Wrap-up for midterm exam and Case Studies
- 8 MIDTERM EXAM (Final Project Topics will be provided)
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- 10 Prescriptive Analytics and Applications (2)
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- 12 Nonlinear Optimization and Decision Analysis
- 13 Big Data Technologies and Analytics /course wrap-up and Case Studies
- 14 Final Project Presentations