



***DECISION
SCIENCE:
A BRIEF
OVERVIEW***



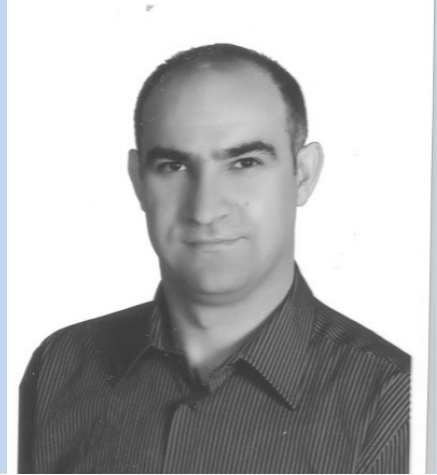
WHO ARE WE?



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Businesses are increasingly collecting large amounts of information about their customers and activities.

*This **big data** is big news with the businesses and governments as they consider how to use this mass of information in a meaningful way.*

Decision Science concentration students use their expertise to

- ✓ *make sense of information,*
- ✓ *interpret it and uncover hidden patterns and important insights,*
- ✓ *enable evidence-based and objective business decisions.*



Combining theoretical concepts with practical application,

***DS major** offers a unique mix of quantitative and behavioral skills relevant to*

- ✓ data analyses,*
- ✓ effective decision-making,*
- ✓ management*

*Decision Sciences concentration aims to provide the students an insight into **business analytics** and explores how organizations can exploit the **big data revolution**.*



is an interdisciplinary field that draws on business, machine learning, data mining, statistical decision theory, operations research, forecasting, survey methods, and simulation theory.



LEARNING OBJECTIVES

- ✓ Demonstrating proficiency with statistical data analysis.
- ✓ Developing the ability to build and assess data based models.
- ✓ Demonstrating skill in data management.
- ✓ Applying data science concepts and methods to solve problems in real-world contexts
- ✓ Conducting survey studies and reporting.

The collage features several key elements:

- Flowchart:** A process diagram starting with '2010-2011 Yeni Kayıt.' (New Registration 2010-2011) leading to 'Type', which then branches into 'Web of Factors', 'Eğitimden beklenti' (Expectations from Education), and 'Eğitimden beklenti' (Expectations from Education). It also includes a 'Table' icon and 'Seçme nedeni : Bilgi' (Reason for Choice: Information).
- Survey Table:** A table with columns for Mean, Std. Dev., Min., Max., and N. It contains data for various statements such as 'The assignments/exams increased the ability to think creatively.' and 'The instructor's grading (assignments/exams) was fair.'.
- SEM Path Diagram:** Titled 'SEM: Initial model with only the direct effect', it shows a path from 'Brand Trust' to 'Brand Loyalty' with a coefficient of .986 (.724)**. Error terms e1, e2, and e3 are shown pointing to 'Brand Loyalty'.
- Software Interface:** A screenshot of a data management software interface showing a table with columns for Name, Customer_No, Type, Width, Decimals, Label, and Values. The table lists items like 'q1', 'q2', 'q3', etc., with their respective data types and labels.

CAREER OPPURTUNITIES in DECISION SCIENCE

- ✓ In addition to career in Finance, Marketing, Human Resources, you can be:
- ✓ - Data Analyst
- ✓ - Data Scientist
- ✓ - Business Analyst
- ✓ - Operations Manager
- ✓ - Researcher



SKILLS YOU SHOULD /WILL HAVE

1. Curiosity
2. Observer
3. Analytical Thinking
4. Communication Skills
5. Fundamentals of Data Science
 - i. Statistics
 - ii. Data Manipulation and Analysis
 - iii. Data Visualization
 - iv. Model Deployment
6. Machine Learning
7. Big Data
8. Precise Decision Making



CONCENTRATION COMPULSORY COURSES

5th Semester

**STAT3001 –
Statistical
Data Analysis**

6th Semester

**QTDS3006 –
Decision
Science
Project**

7th Semester

**STAT 4095 –
Data Mining**

8th Semester

**QTDS4055 –
Simulation
Theory**



CONCENTRATION ELECTIVE COURSES

7th & 8th Semester

- BUS4091 – **Electronic Business**
- QTDS4053 – **Operations Research Applications**
- QTDS4054 – **Python for Data Analysis**
- QTDS4096 – **Game Theory**
- STAT4093 – **Forecasting**
- STAT4094 – **Statistical Process Control**
- MIS3311 – **Knowledge Management**
- MIS3313 – **Business Intelligence**
- MIS3314 – **Human Factors in Computing**
- MIS3315 – **Digital Transformation & Industry 4.0**
- MIS4321 – **Financial Information Systems**
- MIS4342 – **Cloud Computing**
- MIS4352 – **Blockchain Basics**
- MIS4382 – **Ethical Issues in Computing**

**Any
Questions?**

