**Ankara Üniversitesi
Kütüphane ve Dokümantasyon Daire Başkanlığı**

**Açık Ders Malzemeleri**

Ders izlence Formu

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| Dersin Kodu ve İsmi | **İKT238 Statistics 2** |
| Dersin Sorumlusu | Prof. Dr. Onur Özsoy |
| Dersin Düzeyi | Lisans |
| Dersin Kredisi | 4 |
| Dersin Türü | Teorik |
| Dersin İçeriği | WEEK TOPIC Reading Assignment1 Course Introduction: Data and Statistics Chapter 12 Summarizing Data Graphically: Introduction to the Computer Chapter 1 and 22 Summarizing Data Numerically: Statistical tables and graphs. Histograms. Measures of central tendency (arithmetic mean, median, mode). Measures of variability (range, variance, standard deviation). Tchebysh-effs Theorem and the empirical rule. Coefficient of variation. Percentiles and quartiles. Chapter 1 and 22 Summarizing Data Numerically: Statistical tables and graphs. Histograms. Measures of central tendency(arithmetic mean, median, mode). Measures of variability (range, variance, standard deviation). Tchebysh-effs Theorem and the empirical rule. Coefficient of variation. Percentiles and quartiles. Chapter 2 and 33 Probability Theory: Role of probability in statistics. Experiments and experimental outcomes. Sample space, events, union, intersection, and complements of events. Mutually exclusive events, independent events, and conditional probability. Additive and multiplicative rules. Discrete probability distributions. Mathematical expectation. Chapter 43 Discrete Probability Distributions: Random Variables, Expected Value and Variance Chapter 54 Discrete Probability Distributions: Binomial distributions, mean, variance, use of binomial formula and probability tables. Poisson distributions, mean, variance, use of Poisson formula and probability tables. Applications. Chapter 54 The normal distribution: The parameters of the normal distribution. The standard normal distribution. Tabulated areas under the standard normal curve. The standardization formula. Applications. The normal approximation to the binomial. Chapter 6 5 Sampling Distributions: The central limit theorem. Distribution of the mean of a sample from a normal population. Large-sample sampling distributions of sample means and proportion for one and two populations. Chapter 5, 6 and 75 Large-sample estimator: Point and interval estimation. Interpretation of these estimators. Unbiased estimators. Large-sample estimation of means and proportions for one and two populations. Chapter 86 Large-sample tests of hypotheses: Large-sample hypothesis testing for means and proportions for one and two populations. Observed significance levels. Chapter 96 Index Numbers Chapter 117 Nonparametric tests Chapter 127 General Overview, questions and answers 8 ANOVA Ch. 109 Regression and Correlation Analysis Ch.1310 Survival Analysis Lecture notes11 Decision Theory Lecture notes12 Computer Applications Lecture notes13 Overview 14 Overview  |
| Dersin Amacı | **Course Objectives:** An important aspect of being a manager is making decisions. The best decisions are those which are made based on fact. Such decisions require the use of data which often exhibit variation. In this class, the underlying principle will be the use of statistical analysis of data to make intelligent, fact-based decisions. We will specifically work on learning the following:1. How to distinguish between different types of data.
2. How to construct and interpret several pictorial and numerical summaries of data.
3. How to calculate, interpret and use measures of variance.
4. How to use probability and probability distributions
5. How to assess the likelihood of important events.
6. How to use the central limit theorem to better understand sampled data.
7. How to estimate parameters of the normal and binomial distributions.
8. How to construct confidence intervals and make decisions based on the confidence intervals
9. How to conduct hypotheses tests.
10. How to do nonparametric tests.
11. How to construct, use, and interpret index numbers.
12. How to use statistical software to make calculations, and
13. how to interpret the computer output.
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| Dersin Süresi | 1 Yarıyıl (4 saat) |
| Eğitim Dili | İngilizce |
| Ön Koşul | YOK |
| Önerilen Kaynaklar | Ozsoy, O., Statistics for Business and Economics, fourth edition, Siyasal Press: Ankara-Turkey. February, 2010. |