**Antalya Bilim University**

**Department of Economics, STAT 1201**

**Statistics 1**

**Spring 2020**

Class time& Place:

Office hours:

Prof. Dr. Mehmet MERT

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Welcome to the course. The primary purpose of this course is to teach students basic statistical concepts, such us descriptive methods, sampling, and estimation with computer applications. The course goal is to be able to apply the concepts and theoretical arguments about basic statistics by using STATA software.

**Recommended Course books:**

Bonamente M., *Statistics and Analysis of Scientific Data*, **2th Edition**, (Springer, 2017).

Brant S., *Data Analysis*, **4th Edition**, (Springer, 2014).

Hardle W. K. & Simar L., *Applied Multivariate Statistical Analysis*, **4th Edition**, (Springer, 2015).

Hastie T., Tibshirani R. & Friedman J., *The Elements of Statistical Learning*, **2th Edition,** (Springer, 2009).

Heiberger R. M. & Holland B., *Statistical Analysis and Data Display*, **2th Edition,** (Springer, 2015).

James G., Witten D, Hastie T. & Tibshirani R., *An Introduction to Statistical Learning*, (Springer, 2013).

Ruppert D. & Matteson D. S., *Statistics and Data Analysis for Financial Engineering*, **2th Edition,** (Springer, 2015).

Wasserman L., *All of Statistics*, Springer texts in statistics, (Springer, 2004).

**Developing Undergraduate Attributes**

Students will be encouraged to develop the following undergraduate attributes by undertaking the course activities and mastering the course contents. These attributes will be assessed within the assessment tasks:

* skills involved in scholarly enquiry;
* the capacity for analytical and critical thinking;
* the ability to engage in independent and reflective learning.

**Academic Honesty and Plagiarism**

Plagiarism is using the words or ideas of others and presenting them as your own. Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. Although plagiarism is well established in Turkish educational system, you will be punished heavily if you are caught do it.

**Assessment Criteria:**

1. **Midterm (40%):** Students are responsible for all class material covered until the midterm exam.
2. **Final exam (60%)**: This exam is cumulative and will focus on all units and topics studied throughout the course, but emphasis will be after midterm.

**Course Schedule**

**WEEK 1**

Introduction to statistics and STATA software

**WEEK 2**

Descriptive statistics

**WEEK 3**

Computer applications of descriptive statistics using STATA

**WEEK 4**

Sampling theory, Simple random sampling and applications.

**WEEK 5**

Sampling distributions.

**WEEK 6**

Estimation of population mean

**WEEK 7**

Computer applications of estimating population mean using STATA

**WEEK 8**

Midterm exam

**WEEK 9**

Estimations of population proportion and variance

**WEEK 10**

Computer applications of estimating population proportion and variance using STATA

**WEEK 11**

Estimation of the difference of two independent population means and applications using STATA

**WEEK 12**

Estimation of the difference of two dependent population means and applications using STATA

**WEEK 13**

Estimation of the difference of two population proportions and applications using STATA.

**WEEK 14**

Estimation of the difference of two population proportions and applications using STATA.