

CP 524 Computer Application of Advanced Statistical Methods to City and Regional Planning

Course Code:	8530524
METU Credit (Theoretical-Laboratory hours/week):	3 (3-0)
ECTS Credit:	8.0
Department:	City Planning
Language of Instruction:	English
Level of Study:	Graduate
Course Coordinator:	Prof. Dr. Ayşe Gedik
Offered Semester:	Spring Semesters.

Course Objective

The course mainly emphasizes the principles and application of the “statistical thinking” underlying the statistical methods and techniques . The course will provide students an opportunity to synthesize various statistical concepts, to understand the logical bases of statistical methods and techniques, and ultimately their application and interpretation.

In the application phase of the course, SPSS will be used only as a “tool”. In other words, the course is not an SPSS course and does not aim to teach SPSS per se.

Course Content

Subsequent to an overview of descriptive statistics and the principles of hypothesis testing, the subjects to be covered are “Anova”, “Discriminat a.”, “Factor a.”, and “Cluster analysis” .

Under each specific technique, the subjects related to selection and description of “data” set and evaluating the data set in terms of the “assumptions” of the related technique, formulation of the “hypothesis”, carrying out the the appropriate “tests”, and “interpretation” of the results will be studied. The subject such as mathematical proofs will not be covered.

Method of the Course

The course will be in the form of lectures-seminars, and the use of spss in carrying out your lab exercises and homework. Requirements of the course are (1) lab exercises; (2) one homework; and (3) short exams.

(1) Lab exercises: After each lecture concerning a specific technique, “lab excercise” will be carried out by the students. The examples for the “lab exercise” will be same as the examples presented and explained in the SPSS manuals.

(2) Homework: You will have one homework about one of the techniques of your choice which are covered in the course. The homework will include all the steps from the selection of your data set to the interpretation of your results.

(3) There will be one short open book exam for each technique after the respective lecture and lab exercise are covered.

Grading

Lab exercises: 20%

Homework : 35%

Exams: 35%

Attendance: 10%

Attendance will affect your final grade. If the attendance is less than 70%, your grade will be N.A.

Reference Material

The “main” sources of your readings are listed below.

SPSSWIN *manuals* (application manuals with step-by-step empirical example, and user guide manuals about running the programs)

Hair, J.F., A. R.L. Tatham, and W.C. Black. 1998. *Multivariate Data Analysis*. 5th ed. NY: Prentice Hall.

Tabachnick, B.G., and L.S. Fidell. 2001. *Using Multivariate Statistics*. 4th ed. London: Allyn and Bacon.