APPLIED STATISTICS FOR SOCIAL SCIENCES: SYLLABUS

Seghieri - Natilli

Date	Topic	Description	hours
15-Oct-09	Introduction to Statistics	Brief introduction to Statistics	2
20-Oct-09 22-Oct-09	Sampling methods	Most common Sampling methods: proprieties, advantages and disadvantages	4
27-Oct-09	Descriptive statistics	Relation among variables (Chi2, correlation), variability (variance and standard deviation)	2
29-Oct-09	A basic introduction to estimation theory	Point estimation Interval estimation	2
3-Nov-09	Hypothesis Testing Theory	Null and Alternative hypothesis Type I and type II errors, significance level Hypothesis testing for the differences of means: one sample (test t), two or more independent samples (test F). ANOVA. CHI SQUARE test of association	2
5-Nov-09 10-Nov-09	Linear regression models	Functional association among variables Correlation coefficient Simple and Multiple linear regression Measures of model adequacy (i.e. the coefficient of determination) Model specification errors: omitted regressors, irrelevant regressors Practical application of the linear regression model	4
12-Nov-09	Generalized linear models	Logit model: specification + examples. Probit model: specification + examples.	2
17-Nov-09	Multivariate analysis	Cluster analysis Factor analysis Correspondence Analysis	2

References list

Robert M. Groves, Floyd J. Fowler *Survey Methodology* (2004).
Wright, Daniel B. *Understanding statistics: an introduction for the social sciences* (1997)
Freedman, David *Statistics* (1991)