Quantitative methods

OBJECTIVES AND OUTLINE OF THE COURSE

The objectives of the course are twofold. First, students will be introduced to the basic concepts of measurement and sampling. Then, students will get familiar with some elementary methods of data analysis.

REQUIRED READINGS

Singleton & Straits   Singleton, R. A. Jr. and Bruce C. Straits (1999): *Approaches to Social Research*. Third Edition. Oxford University Press: New York/Oxford.

Das Gupta   Das Gupta, P. *Standardization and decomposition of rates. A user's manual.* http://www.census.gov/popest/research/p23-186.pdf, pp. 1-7

Bickel at al.   P. J. Bickel, E. A. Hammel and J. W. O'Connell (1975): Sex Bias in Graduate Admissions: Data from Berkeley, *Science*, Vol. 187 no. 4175 pp. 398-404

Huff   Darrel Huff (1993): *How to lie with statistics*, W. W. Norton & Company

WEEKLY SCHEDULE

Week	Topics	Reading	Date
1.	Introduction. Research design	Singleton & Straits, Ch. 4.	2/7
2.	Measurement. Validity and reliability	Singleton & Straits, Ch. 5.	2/14
3.	Measurement errors	Singleton & Straits, Ch. 10.	2/21
4.	Sampling designs	Huff, Ch. 1.	2/28
5.	The theory of probability sampling	Singleton & Straits, Ch. 6.	3/8
6.	*Sample size determination*	*Singleton & Straits, Ch. 6.*	*3/15*
7.	Midterm exam	Singleton & Straits, Ch. 17.	3/22
8.	Descriptive statistics	Huff, Ch. 2.	3/29
9.	Introduction to the Lazarsfeld paradigm	Huff, Ch. 8.	4/5
10.	The Lazarsfeld paradigm	Bickel et al.	4/12
11.	Extensions of the Lazarsfeld paradigm	-	4/19
12.	Standardization and decomposition of rates	Das Gupta	5/3
13	Data visualization methods	-	5/10
14.	Final exam	-	

ASSESSMENT

Students are expected to read the relevant textbook chapter each week and participate in the discussions
. The final grade is computed by 50% mid-term exam
 and 50% final exam
. Exams consists of several quiz and 1-2 longer essay questions. No make-up exams provided.