

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 et 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	Alt. date
1.	Introduction. Measurement.	-	2/8	2/8
2.	Validity, reliability. Research design	Singleton & Straits, Ch. 5.	2/15	2/15 (x2)
3.	Measurement errors	Singleton & Straits, Ch. 10.	2/22	2/15 (x2)
4.	Sampling designs	Huff, Ch. 1.	3/1	3/1 (x2)
5.	The theory of probability sampling	Singleton & Straits, Ch. 6.	3/8	3/1 (x2)
6.	Sample size determination	Singleton & Straits, Ch. 6.	-	3/1 (x2)
7.	Midterm exam	-	3/22	3/22
8.	Descriptive statistics	Huff, Ch. 2.	3/29	4/5 (x2)
9.	Correlation	Singleton & Straits, Ch. 14.	4/5	4/5 (x2)
10.	Introduction to the Lazarsfeld paradigm	Huff, Ch. 8.	4/12	4/12 (x2)
11.	The Lazarsfeld paradigm	Bickel et al.	4/19	4/12 (x2)
12.	Standardization and decomposition of rates	Das Gupta	4/26	4/26 (x2)
13.	Data visualization methods	-	5/3	4/26 (x2)
14.	Final exam	-	5/10	5/10

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 consist of several quiz and 1-2 longer essay questions. No make-up exams provided.