



UNICAMP

UNIVERSIDADE ESTADUAL DE CAMPINAS

Instituto de Economia

HO-341-B QUANTITATIVE METHODS APPLIED TO ECONOMICS

First semester – 2021

Prof. Eugênia Troncoso Leone

I – AIM

This course is designed for persons with a variety of backgrounds, principally students and researchers from socioeconomic areas. The program provides statistical training in different topics applied to socioeconomic analysis. The statistical training and the use of indicators are illustrated using the computer and the secondary data distributed by international organizations. The course will be taught through classes at "google meet" and material provided in "moodle". The evaluation will be based on a final work delivered by the students at the end of the semester.

II – PROGRAM

1. METHODS FOR DESCRIBING QUANTITATIVE AND QUALITATIVE DATAS: graphical descriptions of qualitative data, measures of central tendency, data variation and relative standing.

2. DEMOGRAPHIC DATA ANALYSIS: population growth, age structure, sex and demographic dependency ratio, ageing index, age specific and crude death rate, birth and fertility ratios, life expectancy, migration rate.

3. EXPLORATORY DATA ANALYSIS

- Association between two quantitative variables and association between one quantitative variable and one qualitative variable.

4. LABOR MARKET INDICATORS: participation and unemployment rates, informality and underemployment rates, prices and salary indexes.

5. SOCIAL INDICATORS: definition and meaning, components, constructions and uses.

- **Poverty and inequality measures:** proportion of poor, Poverty Index, Lorenz curve and Gini Index.

- **Human Development Index (HDI)**

III. REFERENCES

HUSSMANN, R. Measurement of employment, unemployment and underemployment. Available in: <https://www.ilo.org/public/english/bureau/stat/download/articles/2007-1.pdf>

MOREIRA, MORVAN DE M. Structural Changes in the Brazilian Age Distribution. Available in: https://www.academia.edu/7890339/STRUCTURAL_CHANGES_IN_THE_BRAZILIAN_AGE_DISTRIBUTION_1950-2050

POVERTY IN FOCUS. WHAT IS POVERTY? CONCEPTS AND MEASURES, December, 2006. Available in: <http://www.undp-povertycentre.org/site/PublicationShow.do>

SALVERDA, WIEMER; NOLAN, BRIAN; SMEEDING, TIMOTHY M. The Oxford handbook of economic inequality. Oxford University Press, 2009.

UNDP. *Human Development Report.* Available in: <http://hdr.undp.org/en/data>

IV. DATA SITES

NATIONAL: IBGE: <http://ibge.gov.br>; www.google.com.br; www.datasus.gov.br; www.dieese.org.br; www.ipea.gov.br; www.pnud.gov.br; www.bancomundial.org.br

INTERNATIONAL

- U.S. Census Bureau. <http://www.census.gov/>
- EUROSTAT: <https://ec.europa.eu/eurostat/>
- HUMAN DEVELOPMENT REPORT. Available in: <http://www.hdr.undp.org/>
- STATISICAL YEARBOOK FOR LATIN AMERICA AND THE CARIBBEAN 2004. Available in: https://www.un-ilibrary.org/population-and-demography/statistical-yearbook-for-latin-america-and-the-caribbean_dae4af5a-en-es
- INTERNATIONAL DATA BASE. Available in: <http://www.census.gov/ipc/www/idb/>.
- UNITED NATIONS, 2008. Available in: <https://www.wikigender.org/wiki/gender-in-the-press/>
- www.migrationinformation.org