UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Statistics For Tourism: Models and Applications

2122-1-F7601M051

Learning objectives

"Statistics for tourism: Models and applications" aims to give students important statistical tools useful for solving problems related to: dynamic analysis of tourist demand; intervention analysis of tourism data; modeling and forecasting of tourist flows.

Contents

Time series analysis of tourist data. Intervention analysis of tourism. Analysis, modeling and forecasting of tourist flows.

Detailed program

1. Some useful linear operators:
1.1 – The lag operator, non-periodic and periodic.
1.2 – The difference operator, non-periodic and periodic.
1.3 – Use of difference operators to trend and seasonally adjust time series of
tourism
2. – Dynamic analysis of tourism demand based on:
2.1 – stochastic models autoregressive (AR), moving average (MA) and mixed (ARMA), non-seasonal and seasonal;
2.2 – ARIMA stochastic models, non-seasonal and seasonal;
3. – Analysis of intervention effects on tourism, through:
3.1 – formalization of the most important intervention variables;

3.2 – specification of the intervention response functions;
3.3 – specification and estimation of models for intervention analysis in the field of tourism.
4. – Forecasts of tourist flows based on:
4.1 – deterministic and stochastic univariate models;
4.2 – simple and multiple regression models;
4.3 – "qualitative" methods (basics).

Prerequisites

No formal prerequisites, but the knowledge of the concepts of descriptive and inferential statistics are very important

Teaching methods

Lectures, systematically integrated with examples and applications of statistical methods in the field of tourism. Using the software R &/or Rstudio

Assessment methods

The learning assessment is based on a written multiple choice test. The exam consists of questions about theory and simple exercises of interpretation of results / outputs. The former test students' knowledge and understanding of the main concepts of the subject. The latter measure students' ability in the application of such concepts to solve simple practical problems.

In the computer lab or online, it will have the same characteristics

Textbooks and Reading Materials

- The necessary material will be made available during the course

Candela G., Figini P., Economia dei sistemi turistici, McGraw-Hill, Milano, 2005 (cap. 2).
Piccolo D., Introduzione all'analisi delle serie storiche, Carocci Editore, Roma, 1990.

Semester

Second semester.

Teaching language

Italian.