UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Mathematical Models For Hospitality and Tourism Management

2122-1-F7601M054

Learning objectives

Upon completion of this course, students should gain a good understanding of the main issues in Revenue Management through the use of quantitative models, and learn about the application of such models in practice

Contents

Mathematical models developed for tourism management and focusing in particular on applications in airlines and hospitality industry.

Detailed program

1. Introduction to Revenue Management and theoretical framework:
    - Consumer's behavior, willingness to pay, demand curve and price elasticity;
    - Revenue maximization;
    - Price differentiation.
2. Quantitative-based Revenue Management
    - Seat inventory control and Booking Control;
    - Littlewood two classes model;
    - Belobaba n-classes model (Emsr-a and Emsr-b.
3. Price-based Revenue Management.
4. Overbooking.
5. Discrete choice models.

Prerequisites

In this course the knowledge of basic concepts of mathematical analysis and probability are requested.

Teaching methods

Lectures and practical sessions

During Covid-19 emergency classes will be partly offline and partly live streamed

Assessment methods

The exam consists of questions about theory and exercises. 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.

Textbooks and Reading Materials

- Talluri, K.T., Van Ryzin, G.J. "The Theory and Practice of Revenue Management" Springer, 2005.
- Phillips, R.L. "Pricing and Revenue Optimization" Stanford University Press, 2011.

Semester

First semester

Teaching language

Italian