Objectives

“Pricing and Revenue Optimization” focuses on how firms should make pricing and product availability decisions in order to maximize profitability. Through a combination of theory lectures, case studies, class presentations and guest speakers, the course aims to develop a “working knowledge” of Dynamic Pricing and Revenue Management, i.e., to provide students the necessary background, quantitative models, fundamental insights, and data analysis skills that will allow them to identify and exploit opportunities for profit maximization in a variety of business contexts.

Description

“Pricing and Revenue Optimization” is a third-term course in the MSc in Management and the MSc in Finance and Banking degrees, at the Barcelona School of Management. It comprises twenty 90-minute lectures, serving as a core course for students specializing in Business Analytics, and as an elective course for students specializing in Marketing, Entrepreneurship, and Finance and Banking.

Contents

Module 1: Pricing for Revenue Optimization
2. Pricing for Revenue Optimization
3. Pricing under Constrained Supply

Module 2: Dynamic Pricing
1. Customized Pricing
2. Customer Segmentation
3. Markdown Management
4. Demand Forecasting

Module 3: Revenue Management
1. Single-leg Revenue Management
2. Network Revenue Management
3. Overbooking

Module 4: PRO Implementation
1. Evaluating the Effectiveness of PRO
2. Customer Acceptance Issues
Pricing and Revenue Optimization

Methodology

The course follows closely the book of Robert Phillips: “Pricing and Revenue Optimization”, Stanford University Press, 2005 [P05]. Students are strongly encouraged to buy or borrow the book from the library, and complement the material delivered in class by reading the related chapters.

The course includes theory lectures, discussion of case studies, presentations, and guest lectures. Three team assignments will be handed out throughout the term. These assignments are case studies in which students have to combine methods and insights acquired in class with data analysis on Excel. Each team has to submit a PowerPoint presentation and an Excel file that summarize the approach followed and the results obtained.

Evaluation criteria

Case study-based team assignments and class participation. There are no problem sets, exams, or final project.

Prerequisites

The course requires some background in mathematics (basic calculus and optimization) and familiarity with data analysis in Excel. Students without such a skillset are strongly encouraged to take “Quantitative Methods in Management” prior to enrolling.

Bio of the professor

Mihalis G. Markakis is an Assistant Professor in the Department of Economics and Business, at Pompeu Fabra University. He obtained his PhD from the Laboratory for Information and Decision Systems at MIT. His research interests are in modelling, analysis, and optimization of stochastic systems and their applications to Operations Research and Management Science. He is also affiliated with the Barcelona School of Management and the Barcelona Graduate School of Economics, where he regularly teaches graduate courses on the wider field of Operations.