Marketing Analytics

Instructors

Asim Ansari William T. Dillard Professor of Marketing at Columbia University, New York.

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About this course

Marketers are interested in understanding and forecasting how customers purchase products and services and how they respond to marketing actions initiated by the firm. Marketing analysts develop quantitative models that leverage business data, statistical computation, and machine learning to forecast sales and to support important marketing decisions involving customer relationship management, market segmentation, value creation and communication, and monetization. In this course you will learn how to use statistical models and optimization tools to model customer purchase data and how to leverage such data to make optimal decisions.

Topics include customer perception and preference measurement, customer lifetime value assessment, customer choice modeling, segmentation and market structure analysis, market share forecasting, optimal products and product line design, optimal pricing strategies and advertising decision making. Methods and tools include Regression Analysis, Discrete Choice Models such as logistic regression and the Multinomial logit, Conjoint analysis, Multidimensional scaling for preference visualization, clustering and segmentation tools such as K-means, and Finite mixture models among others.

Prerequisites

We will use the R software for all the analytics in the course. We provide a brief tutorial that covers the basics of R. While no programming experience is needed for the course, you will have an easier time if you have prior experience with R or Python.

You also need prior knowledge of probability and statistics and you should be able to understand basic notions of optimization.

Week-by-week

Week 1: Introduction to Marketing Analytics and Customer Analysis

Week 2: Market Segmentation

Week 3: Preference measurement

Week 4: Consumer Choice Models

Week 5: Customer Lifetime Value

Week 6: New Product Decisions

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Week 7: New Product Decisions

Week 8: New Product Decisions

Week 9: Pricing Analytics and Optimization

Week 10: Pricing Analytics and Optimization

Week 11: Advertising

Week 12: Sales Promotions and Course Review

Grading

Quizzes (20%): The course has 11 quizzes.

Assignments (30%): The course has 4 assignments.

Final Exam (50%): There will be a final exam on e week after the last lecture.

Passing Grade

To pass the course, you must score **60% of the total grades or above**. Learners in the verified track are required to take the proctored final exam as one of the requirements for credit eligibility.

Honor Code

Academic Honesty Policy
You are required to read, and understand the following agreement regarding **Academic Honesty**. Each student is soleowner of his own code and work and **must NOT**:

- Submit work that is not original.
- Publish code or solutions online.
- Post the course questions on forums including stack overflow.
- Submit someone else's work, or a modification of that work, with or without that person's knowledge.
- Allow someone else to submit his/her work, or a modification of that work.
- Solve as a group a quiz or project. **All coursework is to be done by the student working alone.**
- Contract course work out to others.
- Plan or execute with another student a cooperative subterfuge during an exam.
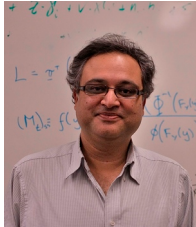- Make use of unauthorized material during an exam.

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Project assignments will be checked with plagiarism detection software.

Thank you for abiding by these rules. Doing so will ensure the experience is fair to everyone taking this class or the future sessions of this class.

Instructor Bios:

Asim Ansari is the William T. Dillard Professor of Marketing at Columbia University. He received his PGDM from the Indian Institute of Management, Bangalore and a PhD in marketing from New York University. His current research focuses on the Bayesian modeling for customer relationship management, personalization and customization of products and marketing actions and preference measurement. His research has appeared in several leading marketing journals. He is on the Editorial board of *Marketing Science*, and the *Journal of Marketing Research*. He has received the Paul Green award from the American Marketing Association for his work on e-customization. In addition, his has been a finalist for the William O' Dell award, the John Little Best Paper Award, Frank M. Bass Outstanding Dissertation Award and the INFORMS Society for Marketing Science Long Term Impact Award.
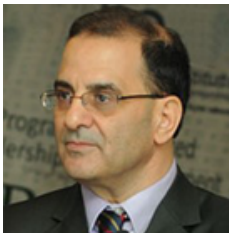
Kamel Jedidi is the John Howard Professor of Business and the Chair of the Marketing Division at Columbia Business School, New York. He holds a bachelor's degree in Economics from University of Tunis and Master and Ph.D. degrees in Marketing and Statistics from the Wharton School, University of Pennsylvania. Dr. Jedidi has extensively published in leading marketing and statistical journals. His research interests include pricing, product positioning, and market segmentation. He was awarded the 1998 IJRM Best Article Award and the Marketing Science Institute 2000 Best Paper Award. He was also finalist for 2009 Paul Green Award for the *Journal of Marketing Research* and for the 2009 Long-term Impact Paper Award for *Marketing/Management Science.* Dr. Jedidi is senior Editor for the *Consumer Needs and Solutions* Journal and serves on the editorial board for the *Journal of Business-to-Business Marketing.* Dr. Jedidi has conducted seminars at several business conferences and universities

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and also spoken at and consulted with several multinational companies. He is a Founding Trustee of the Marketing Accountability Standards Board (MASB), a member of the Faculty Steering Committee, Columbia Global Centers (Amman), a Senior Editor for Rutgers Business Review, and a member of the Academic Council of ENPC's School of International Management.