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## Discrete Choice Analysis: Predicting Demand and Market Shares [14.61s]

**Moshe Ben-Akiva**

June 14-18, 2010 | \$3,900 | 2.9 CEUs

### Overview

This one-week program undertakes an in-depth study of discrete choice models (logit, nested logit, generalized extreme value, probit, logit mixtures), data collection, specification, estimation, statistical testing, forecasting, and application. The covered topics include analysis of revealed and stated preferences data, sampling, and simulation-based estimation, discrete panel data, Bayesian estimation, discrete-continuous models, menu choice, and models with latent variables. The course includes practical application sessions where participants will be provided with discrete choice software to learn how to estimate and test discrete choice models taught in lecture using real databases, and gain hands on experience in using new discrete choice techniques for practical applications. By examining actual case studies of discrete choice methods, students will be familiarized with problems of model formulation, testing, and forecasting,

Discrete choice models are widely used for the analysis of individual choice behavior. It can be applied to choice problems in many fields such as economics, environmental management, urban planning, etc. For example, it is used in marketing research to guide product positioning, pricing, product concept testing, and many other areas of strategic and tactical interest. Recent applications to predict changes in demand and market shares include areas such as: choice of travel mode, coffee brand, telephone service, soft drinks and other foods, and choice of durables such as automobiles, air conditioners and houses.

### Outline of the Program

The course consists of a series of lectures and labs that develop discrete choice concepts and techniques, and demonstrate their applications. The labs offer hands on experience in applying the material covered in the lectures using discrete choice software and real-world data sets.

The course director and principal lecturer is **Moshe Ben-Akiva**, Edmund K. Turner Professor of Civil and Environmental Engineering. Lab sessions are lead by Dr. **Carmine Gioia** (CEO, DecisionLab / MIT Affiliate and Visiting Scientist). All of the instructors have extensive experience in the diverse applications of discrete choice models in both the public and private sectors.

### Apply On-Line!

Scholarship opportunities are available. For complete course info, contact Tina Xue at [tinaxue@mit.edu](mailto:tinaxue@mit.edu) or visit: [http://web.mit.edu/professional/short-programs/courses/discrete\\_choice\\_analysis.html](http://web.mit.edu/professional/short-programs/courses/discrete_choice_analysis.html)