

Predict 450 – Marketing Analytics – Winter 2015

Syamala Srinivasan, Ph.D.

syamala.srinivasan@northwestern.edu

Course Description:

This course provides a review of some of the quantitative methods used to support marketing strategy and tactics. It gives students an opportunity to work with data about customer demographics, marketing communications, and purchasing behavior. This is a case study and project-based course involving extensive data analysis.

Texts and Other Resources:

A *must* if you don't have prior training in marketing:

Kotler, P., & Keller, K. (2012). *Marketing management* (15th ed.). Boston, MA: Prentice Hall. [ISBN-13: 978-0133856460]

**Marketing is a domain replete with jargon that you must be familiar in order to best address the problems marketers face.*

Recommended as a primer for Bayesian statistics in R:

Albert, J. (2008) *Bayesian Computation with R*. New York: Springer. [ISBN 978-0-387-92298-0]

Recommended as a more in-depth book about Bayesian statistics and using R:

Lynch, Scott (2007) *Introduction to Applied Bayesian Statistics and Estimation for Social Scientists*. New York: Springer. [ISBN 978-0387712642] (This book is available in electronic form from the NU Library.)

Recommended for those with no real experience to speak of with R:

Lander, Jared. (2014) *R for Everyone*. Upper Saddle River NJ: Pearson. [ISBN-13 978-0-321-88803-7]

Miller, T. W. (2014). *Modeling techniques in predictive analytics: Business problems and solutions with R*.

Upper Saddle River, N.J.: Pearson. Chapter 2 (Advertising and Promotion, pages 15–28). [print: ISBN-13: 978-0-13-341293-2; electronic: ISBN-13: 978-0-13-341297-0]

[No purchase necessary. Selected sections from the electronic edition are posted to Blackboard.]

Orme, B. K. (2010). *Getting started with conjoint analysis: Strategies for product design and pricing research* (2nd ed.). Madison, Wisc.: Research Publishers LLC. [electronic edition ISBN 13: 978-1-60147-110-9] [No purchase necessary. Selected chapters from the electronic edition are posted to Blackboard.]

Selected other readings will be provided throughout the course.

Software:

This course requires the R software environment. R software is free, open-source software available for Mac/OSX and PC/Windows. Obtain the software from the Comprehensive R Archive Network <<http://cran.r-project.org/>>.

Many users of R, and in particular new users of it, find that RStudio, an integrated development environment (IDE) for R, make R more convenient to use. You can download RStudio at <http://www.rstudio.org>.

As a student in the MSPA program you can also make use of NU's Social Science Computing Cluster (SSCC). Connecting to and logging in to the SSCC requires using the SSH protocol over VPN from off-campus locations. Information about the SSCC and how to connect to it can be found at:

<http://www.it.northwestern.edu/research/sscc/>

Many analytics tools, including R and RStudio, are available on the SSCC that can be used to complete this course's assignments.

Prerequisites:

PREDICT 401 and PREDICT 410

Learning Goals:

The goals of this course are to:

- Construct analytic projects to solve businesses challenges and drive business growth.
- Evaluate analytic project results from both a statistical and business impact viewpoint.
- Interpret analytic project results to recommend marketing strategy and business actions.
- Forecast business impact of marketing actions taken based on analytic decision tools.
- Apply best practices for implementing predictive analytics and modeling strategy in performance-based organizations.