RUTGERS
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Newark and New Brunswick

Marketing Models 26:630:675	**S. Chan Choi, PhD, Professor**
Spring 2017	Office: 100 Rock #3139, NB Campus
	1 WP #1029B, Newark Campus
Classroom: 1WP 204	Office Phone: 848-445-3525
Class time: Tuesdays 10:00-12:50 AM	Email: chanchoi@rutgers.edu
	Office Hours: Tuesdays 2-3 PM (Newark)

COURSE DESCRIPTION

This course focuses on recent developments of quantitative methods in marketing decision making. The course covers the basics of building theoretical and empirical models in marketing, and then surveys traditional and recent studies in such areas of product, price, advertising, and distribution. The goal of the course is to a) raise students' awareness of this literature and b) stimulate new research interests. This doctoral seminar is designed to help you learn how to publish in top scholarly journals, so you will have the opportunity to write a research paper applying modeling methods to a marketing problem.

COURSE MATERIALS

1. Background Materials
    *   (WN) Winer and Neslin (2014), *The History of Marketing Science*, World Scientific Publishing (free)
        *   http://www.worldscientific.com/worldscibooks/10.1142/9128#t=toc
    *   (EL) Eliashberg and Lilien (1993), *Handbook in Operations Research and Management Science: V 5, Marketing*, North Holland
        *   http://www.sciencedirect.com/science/handbooks/09270507/5
        *   Archibald S. Alexander Library (College Avenue) - STACKS   HF5415.122.M38 199
        *   John Cotton Dana Library (Newark) - STACKS HF5415.122.M38 1993
    *   (T) Tirole (1988), *The Theory of Industrial Organization*, The MIT Press
        *   Kilmer Library (Livingston) - STACKS HD2326.T56 1988
    *   (LKM) Lilien, Kotler, and Moorthy (1992), *Marketing Models*, Prentice Hall

2. Reading List (See Course Schedule part at the end)

LEARNING GOALS AND OBJECTIVES

By the end of the course, students should be familiar with the key issues and approaches in analytical models of marketing, the strengths of these research streams, and the opportunities to extend them.

APPROACH and COURSE FORMAT

The course meets each week for 3 hours. The semester will be divided into three parts. The first six weeks will be used for reviewing the basics of mathematics, economic models, game theory concepts, conjoint models and other building blocks for analytical modeling. In the second part, marketing models for various marketing mix variables will be reviewed. The last part consists of student presentations of term papers.

Papers to Study

We will spend the majority of time reviewing 2-3 papers in depth each week. Each student is expected to read the required readings to be discussed. In addition, students are encouraged to pursue additional optional readings as time permits to obtain a broader sense of research in the area.

Group Work

From the second week, *two students* will work as a group to study one article and "teach" the class. *Two groups* will be assigned to make presentations each week. After each presentation, the class will discuss and evaluate the article.

Individual Homework

In order to facilitate the discussion, *all other students* will submit 1-2 page summaries for the two articles to be discussed. The summary should include: objective of the paper, its unique contribution, why it is important, hypotheses if any, assumptions in the model, key equations, key findings, key limitations, and opportunities to extend the work. When needed, I will interject to give a brief lecture.

Term Paper

In Week 6, *each student* will briefly prepare and present a 2-3 page *initial proposal* for a term paper. The term paper will be an extension of one or more published articles. The initial proposal should outline why the idea is important, and what additional contribution is expected from the idea. Try

not to aim for a brilliant new model. Instead, focus on how the existing model(s) can be improved. During the presentation, I will provide feedbacks and suggestions on the topic/methodology. The topic may be modified or revised during the next few weeks as we learn more.

Each student will work on developing the proposal into a more *advanced proposal* (term paper) by the end of the semester. These term papers would be at least half-cooked with solid research ideas. The last two weeks will be used for student presentations on individual term papers.   The term paper should offer an improved model or an approach at minimum. Even if you may not have solved it analytically or have used it for an empirical study by the end of the semester, the paper should at least explain how it is related with the existing literature, how it is different from them, and what incremental contribution will be made to the body of knowledge.   Each student will make a 20-minute presentation of the proposal in class.

GRADING POLICY

Students will be graded using the following criteria: class participation (20%), paper summaries (30%), and the final project (50%).

ACADEMIC INTEGRITY

Students are responsible for understanding the RU Academic Integrity Policy:
(https://slwordpress.rutgers.edu/academicintegrity/wp-content/uploads/sites/41/2014/11/AI_Policy_2013.pdf)
See business.rutgers.edu/ai for more details.

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: https://ods.rutgers.edu/students/documentation-guidelines. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: https://ods.rutgers.edu/students/registration-form.

Tentative Schedule (Any revision will be posted on the Bb site)

Wk	Date	Topic	Book/Articles
1	1/19	Intro to Modeling	EL-Ch1; WN-Ch1
			Lehman et al. (2011), Shugan (2003)
2	1/26	Background Math	LKM-Apdx
			Moorthy (1993), Varian (2009)
3	2/2	Oligopoly, Competition	Tirole-Ch2&7
			Hotelling (1929), Moorthy (1985)
4	2/9	Game-Theoretic Models	EL-Ch4
			Ailawadi et al. (2005), Amaldos&Shin (2015)
5	2/16	Term paper plan	Present term paper proposals
			Practice: Manuscript review
6	2/23	Product	EL-Ch8
			Choi&Coughlan (1996), Luo (2011)
7	3/2	Price	EL-Ch11
			Balasubramanian et al. (2015); Israeli et al. (2016)
8	3/9	Distribution Channel	WN-Ch10
			Choi (1991), Raju & Zhang (2005), Ingene et al. (2012)
9	3/23	Advertising	WN-Ch8
			Esteves&Resende (2016), Anderson&Simester (2013)
10	3/30	Promotion	WN-Ch17
			Gerstner&Hess (1995), Sigue (2008)
11	4/6	SCM-Mktg Interface	Choi et al. (2016), Cai (2010)
			Bell et al. (2002), Wang (2004)
12	4/13	Special Topics-Social Media(?)	Culotta&Cutler (2016)
			Toubia&Stephen (2013)
13	4/20	Paper presentation	Term paper: either a review paper or your own model
14	4/27	Paper presentation	Term paper: either a review paper or your own model

Referenced Articles

1. Introduction
   - Shugan, Steve (2003), "Defining Interesting Research Problems," Marketing Science, 22(1), 1-15.
   - Lehman, Donald, Leigh McAlister & Richard Staelin (2011), "Sophistication in Research in Marketing," Journal of Marketing, 75 (July), 155-165.

2. Background Math
   - Moorthy, Sridhar (1993), "Theoretical Models in Marketing," Journal of Marketing, 57 (April), 92-106.
   - Varian, Hal (2009), "How to Build an Economic Model in Your Spare Time," The American Economist, 41 (2), 3-10.

3. Oligopoly and Competition
   - Hotelling, H. (1929), "Stability in Competition," Economic Journal, 39, pp. 41-57.
   - Moorthy, Sridhar (1985), "Using Game Theory to Model Competition," Journal of Marketing Research, 22, 262-82.

4. Game Theoretic Models Applied in Marketing
   - Ailawadi, k, P. Kopalle, and S. Neslin (2005), "Predicting Competitive Response to a Major Policy Change: Combining Game-Theoretic and Empirical Analyses," Marketing Science, 24 (1), 12-24.
   - Amaldos, W. and W. Shin (2015), "Multitier Store Brands and Channel Profits," Journal of Marketing Research, 52 (December), 754-767.

5. Term Paper Plan/ Practice Reviewer

6. Product

   - Choi, S.C. and A. Coughlan (1996), "Private Label Positioning: Quality versus Feature Differentiation from the National Brand," Journal of Retailing, 82 (2), 79-93
   - Luo, L. (2011), "Product Line Design for Consumer Durables: An Integrated Marketing and Engineering Approach," J. of Marketing Research, 48 (1), 128-139

7. Price
   - Israeli, A., E. Anderson, A. Coughlan (2016), "Minimum Advertised Pricing: Patterns of Violation in Competitive Retail Markets," Marketing Science, 35 (4), 539-564
   - Balasubramanian, S., S. Bhattacharya, and V. Krishnan, "Pricing Information Goods: A Strategic Analysis of the Selling and Pay-per-Use Mechanisms," Marketing Science, 34 (2), 218-234

8. Distribution Channel
   - Choi, S.C. (1991), "Price Competition in a Channel Structure with a Common Retailer." Marketing Science, 10 (4), 271-296

- Raju, J. and J. Zhang (2005), "Channel Coordination in the Presence of a Dominant Retailer," Marketing Science, 24 (2), 254-262
- Ingene, C., S. Taboubi, and G. Zaccour (2012), "Game-Theoretic Coordination Mechanisms in Distribution Channels: Integration and Extensions for Models without Competition," Journal of Retailing, 88 (4), 476-496

9.   Advertising
- Esteves. R-B and J. Resende (2016), "Competitive Targeted Advertising with Price Discrimination," Marketing Science, 35 (4), 576-587
- Anderson, E. and D. Simester (2013), "Advertising in a Competitive Market: The Role of Product Standards, Customer Learning, and Switching Costs," Journal of Marketing Research, 50 (Aug), 489-504

10.   Promotion
- Gerstner, E. and J. Hess (1995), "Pull Promotions and Channel Coordination," Marketing Science, 14 (1), 43-60
- Sigue, S. (2008), "Consumer and Retailer Promotions: Who is Better Off?" Journal of Retailing, 84 (4), 449-460

11.   SCM-Marketing Interface
- Choi, S.C., J.M. Song, Y. Zhao, and X. Xu (2016), Models of Channel Coordination, (Ingene, C. Ed.) Handbook of Marketing Channels, forthcoming.
- Cai, G. (2010), "Channel Selection and Coordination in Dual-Channel Supply Chains," Journal of Retailing, 86 (1), 22-36
- Bell, D., G. Iyer, and V. Padmanabhan (2002), "Price Competition under Stockpiling and Flexible Consumption," Journal of Marketing Research. 39 (Aug), 292-303
- Wang, H. (2004), "Do Returns Policies Intensify Retail Competition?" Marketing Science, 23 (4), 611-613

12.   Social Media
- Culotta, A. and J. Cutler, "Mining Brand Perceptions from Twitter Social Networks," Marketing Science, 35 (3), 343-362
- Toubia, O. and A. Stephen. "Intrinsic vs. Image-Related Utility in Social Media: Why Do People Contribute Content to Twitter?" Marketing Science, 32 (3), 368-292