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
     - [http://www.worldscientific.com/worldscibooks/10.1142/9128#t=toc](http://www.worldscientific.com/worldscibooks/10.1142/9128#t=toc)
     - Archibald S. Alexander Library (College Avenue) - STACKS HF5415.122.M38 199
     - John Cotton Dana Library (Newark) - STACKS HF5415.122.M38 1993
     - Kilmer Library (Livingston) - STACKS HD2326.T56 1988

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**


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.
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<thead>
<tr>
<th>Wk</th>
<th>Date</th>
<th>Topic</th>
<th>Book/Articles</th>
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<tbody>
<tr>
<td>1</td>
<td>1/19</td>
<td>Intro to Modeling</td>
<td>EL-Ch1; WN-Ch1; Lehman et al. (2011), Shugan (2003)</td>
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<tr>
<td>2</td>
<td>1/26</td>
<td>Background Math</td>
<td>LKM-Apdx; Moorothy (1993), Varian (2009)</td>
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<td>3</td>
<td>2/2</td>
<td>Oligopoly, Competition</td>
<td>Tirole-Ch2&amp;7; Hotelling (1929), Moorothy (1985)</td>
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<td>4</td>
<td>2/9</td>
<td>Game-Theoretic Models</td>
<td>EL-Ch4; Ailawadi et al. (2005), Amaldos&amp;Shin (2015)</td>
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<td>5</td>
<td>2/16</td>
<td>Term paper plan</td>
<td>Present term paper proposals; Practice: Manuscript review</td>
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<td>6</td>
<td>2/23</td>
<td>Product</td>
<td>EL-Ch8; Choi&amp;Coughlan (1996), Luo (2011)</td>
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<td>7</td>
<td>3/2</td>
<td>Price</td>
<td>EL-Ch11; Balasubramanian et al. (2015); Israeli et al. (2016)</td>
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<td>8</td>
<td>3/9</td>
<td>Distribution Channel</td>
<td>WN-Ch10; Choi (1991), Raju &amp; Zhang (2005), Ingene et al. (2012)</td>
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<td>9</td>
<td>3/23</td>
<td>Advertising</td>
<td>WN-Ch8; Esteves&amp;Resende (2016), Anderson&amp;Simester (2013)</td>
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<td>Media(?)</td>
<td>Culotta&amp;Cutler (2016)</td>
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<td>13</td>
<td>4/20</td>
<td>Paper presentation</td>
<td>Term paper: either a review paper or your own model</td>
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<tr>
<td>14</td>
<td>4/27</td>
<td>Paper presentation</td>
<td>Term paper: either a review paper or your own model</td>
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Referenced Articles

1. Introduction

2. Background Math

3. Oligopoly and Competition

4. Game Theoretic Models Applied in Marketing

5. Term Paper Plan/ Practice Reviewer

6. Product

7. Price

8. Distribution Channel
• Raju, J. and J. Zhang (2005), “Channel Coordination in the Presence of a Dominant Retailer,” Marketing Science, 24 (2), 254-262

9. Advertising

10. Promotion

11. SCM-Marketing Interface

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