Course Syllabus and Schedule

**Instructor:** Professor Raghu Iyengar  
(215) 898-2391 (W)  
(215) 898-2534 (Fax)  
756 Jon M. Huntsman Hall, 3730 Walnut Street  
Philadelphia, PA 19104  
email: riyengar@wharton.upenn.edu

**Administrative Coordinator:** Karen Ressler, resslerk@wharton.upenn.edu

**Teaching Assistant:** Qi Yu (yuqi.thu@gmail.com)

**Office Hours:** Mondays, 3:30PM-4:30PM, JMHH 756

**Recommended Text:**  
Aaker, Kumar, Leone and Day (AKLD)  

**Required Bulkpack:** Please obtain. There are cases and assigned readings.

**Software:** JMP and Excel.

**Course Website:** Canvas

**Group Assignments:**  
(i) There will be 5 group assignments due during the semester.  
(ii) Group formation is discussed below.

**Guest Speakers:** I will have 4-6 Guest Speakers during the semester.
Overview and Objectives

Firms have access to detailed data of customers and past marketing actions. Such data may include in-store and online customer transactions, customer surveys as well as prices and advertising. Using real-world applications from various industries, the goal of the course is to familiarize students with several types of managerial problems as well as data sources and techniques, commonly employed in making effective marketing decisions. The course would involve formulating critical managerial problems, developing relevant hypotheses, analyzing data and, most importantly, drawing inferences and telling convincing narratives, with a view of yielding actionable results.

Course Materials and Approach

In the course we will use a variety of readings, cases and computer-based exercises. The readings and complete list of cases are contained in the course bulk pack. Lecture notes and additional handouts will be made available throughout the semester. The readings and cases are designed to introduce concepts and principles. Please read the assigned reading and cases before coming to class.

The computer and data-based exercises are designed to give you hands-on experience with making effective marketing decisions. My overall philosophy is there is no better way of developing an understanding of marketing analytics other than “learning by doing”.

Course Software

I will demonstrate statistical analyses using Excel or JMP. You are not required to do your assignments in these two software packages; however, I or the TA can’t promise you quality support if you choose a package that I do not know.
Assessment

Your final grade in the course will be based on class participation (case preparation and general contribution), written assignments, and a final examination. The evaluation is as follows:

A. Class Participation 10%
B. Group Assignments 50%
C. Final Examination (individual) 40%

Please note that no late assignments will be accepted. All written work is due on the specified date. The due dates for the assignments are listed on the course schedule. A more detailed outline of the evaluation procedure and requirements for A through C is included at the end of this document. Please also read Schedule D – electronic device policy.

Group Formation

Students must organize themselves into groups of 3 to 5 people in order to do the group assignments.
<table>
<thead>
<tr>
<th>Lecture #</th>
<th>Topic, Readings, Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Descriptive Analytics</strong></td>
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</table>
| 1 | Course Introduction  
READING: Backward Marketing Research |
| 2 | Primary Data  
APPLICATION: Communispace |
| 3 | Secondary Data |
| 4 | Surveys  
READING: Customer Discovery and Validation for Entrepreneurs |
| 5 | A / B Tests  
READING: Perils of Proactive Churn Prevention |
| 6 | Simulated Test Markets - Go/ No Go Decisions  
APPLICATION: Tru-Earth Healthy Foods |
| 7 | Statistical Tests  
READING: “How Optimizely (Almost) Got Me Fired (BlogPost)” |
| 8 | Guest Speaker #1 (URBN) |
| **Predictive and Prescriptive Analytics** | |
| 9 | Multiple Regression -I  
APPLICATION: Quality Kitchen’s Meatloaf Mix |
| 10 | Multiple Regression – II  
APPLICATION: L’Occitane (Story Telling with Analytics, On Canvas) |
| 11 | Categorical Regression (Logistic)  
READING: Advanced Regression Models (On Canvas) |
<p>| 12 | Machine Learning Models for Prediction |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>13</td>
<td>Conjoint Analysis - I</td>
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<tr>
<td>14</td>
<td>Conjoint Analysis - II</td>
</tr>
</tbody>
</table>
| 15   | Categorical Regression (Multinomial)  
READING: Advanced Regression Models (On Canvas) |
| 16   | Choice Based Conjoint Models |
| 17   | Guest Speaker #2 (Deloitte) |
| **Market Structure** | |
| 18   | Segmentation |
| 19   | Factor Analysis – I |
| 20   | Factor Analysis – II |
| **New Trends** | |
| 21   | Social Network Analytics  
READING: How Social Networks and Opinion Leadership Affect the Adoption of New Products |
| 22   | Guest Speaker #3 (Annalect) |
| 23   | Text Analytics – NLP |
| 24   | Social Media Advertising  
APPLICATION: Advertising Experiments at RestaurantGrades |
| 25   | Guest Speaker #4 |
| 26   | CLV and Firm Valuation  
READING: Probability Models for Customer Base Analysis |
| **Wrap Up** | |
| 27   | Application: Ford KA |
| 28   | Conclusions |
Assessment Details

A. Contribution to Class Discussion (10%)

I expect you to be on time to class. I will “cold call” throughout the ensuing discussion. Please be prepared. I will take attendance (likely not every session but randomly).

Based on my attendance records, you may miss one class without affecting your participation grade. Each missed class after that will lead to a reduction in your class participation grade by 25%.

I will evaluate you on how well you respond to questions and on how effectively you take into account the comments and analyses of your classmates. Please do not simply take up air time. In order to obtain a grade for class participation you must attend the class sessions and contribute meaningfully.

B. Group Assignments (50%)

The assignments will be put in Canvas. There will be five assignments. Deadlines will be strictly enforced. You will receive a 0 on an assignment if you submit after the deadline.

   (1) Go / No Go Decisions (January 29th) - 10%
   (2) Hypothesis Tests and Regression (Feb 26th) – 10%
   (3) Conjoint Analysis and Segmentation (March 21st) 10%
   (4) Logistic Regression and CRM (April 9th) – 10%
   (5) Ford KA (April 23rd) – 10%

C. Individual-level Final Examination (40%)

D. Electronic Device Policy: The Wharton School’s policy is not to allow the use of Electronic Devices in MBA classes, unless specifically permitted. Please see the electronics in the classroom policy: https://mba-inside.wharton.upenn.edu/wharton-mba-academic-policies/

This course completely adheres to that policy. Consequently, make sure any electronics (e.g., phone, laptop or tablet) are shut off and put away, unless explicitly instructed otherwise.

If you are observed using any electronics in class without permission once, your course grade will be decreased by one full letter (e.g., A to B, B- to C-). If you are observed doing so twice, your course grade will be F.