MBA Customer Management

Columbia Business School

Fall 2022

Instructor:
Cecilia Dones

Time and Room:
TBD

Teaching Assistant: TBD

Professor Office Hours: By appointment

TA Office Hours: TBD

MOTIVATIONS AND OBJECTIVES

‘There is only one boss. The customer. And he can fire everybody in the company from the chairman on down, simply by spending his money somewhere else.’

- Sam Walton, American Businessman, Wal-mart

As data and information continues to become more readily accessible to both firms, its competitors, and consumers, one of the ways that firms will be able to maintain competitive advantage will be through actively nurturing their consumer and potential consumer relationships.

The purpose of this course is two-fold:

1. To provide a comprehensive understanding of concepts, theories, and philosophies behind customer relationship management and
2. To establish and apply consumer analytics on data in order to create value opportunities at the intersection of consumer needs and wants and business performance

The course will emphasize quantitative analysis with support from qualitative techniques. Quantitative analysis will provide the numerical support for making the business case for or making choices within CRM. Qualitative supporting analysis will support influencing stakeholders and managing expectations internally of CRM programs. A blend of both is required to navigate the complexity of the consumer data space and effectively implement a CRM program.
Learning objectives for this course are as follows:

- Understand key ideas and concepts in customer management
- Summarize the data requirements and infrastructure required to work with Consumer Data
- Compare and contrast current firms in the CRM ecosystem (eg. Salesforce, Hubspot)
- Analyze different CRM models and articulate the roles of each model aligned against different consumer stages
- Apply statistical methods to address different CRM models
- Understand and apply common analyses to plan and optimize CRM programs: Cohort Analyses, Customer Lifetime Value (CLTV) Analyses, Cost Per Acquired Customer (CAC) Analyses

Examples of applications of the contents of this course is as follows:

- Marketing managers seeking to find new growth opportunities using the current product set
- eCommerce (Direct To Consumer) managers seeking to leverage digital consumer journeys to capitalize on growth opportunities
- Analytics managers seeking to deepen their practice in the marketing analytics domain
- Financial managers seeking to manage trade-offs between spends on different marketing projects
- Consultants in the field of Marketing and Advertising
- Start-up entrepreneurs seeking to leverage the above techniques to grow their business

Students who successfully complete this course will take away both theoretical understanding and practical application of CRM through the lens of data, technology, and analytics.

Prerequisites: Students need sufficient mathematical background to handle the tools that will be introduced and discussed. Familiarity with the following statistical concepts: descriptive statistics, hypothesis testing, and regression analysis would be helpful, but is not necessary. The topics covered within the CBS CORE statistics course (Managerial Statistics) or equivalent will be sufficient background for this course.

COURSE ORGANIZATION AND MATERIALS

The course is designed to be multi-modal with a blend of lectures, case-study discussions, practical applications in lecture, homework assignments, and a group project.

There is no formal textbook for the course, but lecture notes covering the material presented in class will be distributed on a session-to-session basis. Excel spreadsheets used in class will be made available to the students.

The culmination of this course is for students to be able to set up and run optimizations of an organization’s CRM program focused on balancing Consumer Acquisition Cost (CAC) to Customer Lifetime Value (CLV). In order to achieve this goal, the elements of this equation will be introduced and developed individually and then combined together within the last few lectures of the course.
The course is divided into 3 main sections:

- Customer Acquisition. (Sessions 1 & 2).
  - This section will seek to address the questions: Who are my customers? Which ones are the best? What does ‘best’ mean?
  - Analytical techniques can include: factor analysis, cluster analysis: hierarchical (utilizing distance methods such as Euclidean or Manhattan) and non-hierarchical methods (k-means)
  - Calculations will focus on how to calculate the cost of customer acquisition

- Customer Retention & Development. (Sessions 3 & 4).
  - This section will seek to address the questions: Which customers should I keep? What techniques can I use to keep them?
  - Analytical techniques can include: propensity scoring (logistic regression analysis), churn analysis, survival analysis (proportional hazards models)
  - Calculations will focus on how to calculate consumer lifetime value

- Customer Life-Cycle Management. (Sessions 5 & 6).
  - This section will seek to address the questions: How do I tie the cost and revenue side together to evaluate my best actions with my customers? How do I maximize value effectively and efficiently?
  - Analytical techniques can include: optimization
  - Effective analytical communication will pull together data visualization and action-oriented strategic recommendations

Students will be expected to complete the required readings prior to class. Practical exercises will be conducted both in-class as well as take-home assignments to reinforce methods and techniques discussed in lecture.

While all analyzes for the course can be conducted in Excel, and the output and write-up will be what is graded, it is highly recommended to leverage other open source languages such as R or Python which is becoming more commonly used in practice.
EVALUATION

Homework Exercises (40%): There will be 2 exercise sets which reinforce the application of concepts and methods learned in class each worth 20% of the final grade. All of the numerical work can be completed using Excel (although students are welcome to use other software packages if they wish to). All HW exercises fall under Category B2 (Individual with Discussions of Concepts Only).

Final Group Project (50%): Combination of Final Group Presentation (40%) + Final Group Proposal (10%)

Final Group Proposal (10%): The final project proposal is a maximum 3-page paper which describes the scope of the final project. The focus of the proposal is to align on early feedback on the industry vertical and business prior to the final project. Further details will be outlined and discussed in lecture 1. The group project falls under Category A (Group).

Final Group Presentation (40%): The final project is an up to 10-minute presentation (max 5 slides) to a C-Level audience of peers with an accompanying memo (max 5 pages) to the Head of CRM and Head of Analytics. The focus of the presentation will be a current CRM program within the organization and whether to continue as is, increase resources, or stop the program. Further details will be outlined and discussed in lecture 1. The group project falls under Category A (Group).

Class Participation (10%): Combination of Attendance + Pre-Session Preparation (5%) + In-class Participation (5%)

Attendance + Pre-Session Preparation (5%): Students are expected to prepare appropriately for session via completing the required readings and turning-in via Canvas answers to the Strategic Thought Starters related to the required readings. All Strategic Thought Starters exercises fall under Category B2 (Individual with Discussions of Concepts Only).

In-class Participation (5%): Each lecture will begin with a case study for discussion. Students will be selected at the point in time to lead the discussion about the case study. Students are encouraged to be actively engaged in the lectures and to contribute actively in developing ideas.
### COURSE SCHEDULE

*Note: There is one lecture each week, 3 hours long with a 15-minute break.*

<table>
<thead>
<tr>
<th>Date</th>
<th>Course Focus</th>
<th>Class Topic</th>
<th>Before Class Required Readings</th>
<th>Before Class Due On Canvas</th>
</tr>
</thead>
</table>
| TBD  | Customer Acquisition | **Session 1a:** Introductions & Motivations  
**Session 1b:** CRM Strategy In Context & CRM Analytics Overview  
**Note:** Exercise Set #1 Released | **HBR:** How Chinese Retailers Are Reinventing the Customer Journey  
By: Mark J. Greeven; Katherine Xin; George S. Yip  
**HBR:** Customer Experience in the Age of AI By: David C. Edelman; Mark Abraham  
**HBR:** SalonScale: Start-Up Customer Relationship Strategies for Niche Market Growth By: Simon Parker; Peter Moroz | 1.Strategic Thought Starters (Individual) |
| TBD  | Customer Acquisition | **Session 2a:** Customer Acquisition  
**Session 2b:** Customer Segmentation, CRM Campaign Analysis, Customer Acquisition Cost (CAC) | **HBR:** Customer Relationships Evolve - So Must Your CRM Strategy  
by Jonathan Z. Zhang and George F. Watson  
**HBR:** Putting the 'Relationship' Back Into CRM by Susan Fournier and Jill Avery | 1.Strategic Thought Starters (Individual) |
| TBD  | Customer Retention & Development | **Session 3a:** Guest Lecture *Head of CRM*  
**Session 3b:** Loyalty & Customer Behavioral Segmentation, Cross-Sell/Up-Sell Models  
**Note:** Exercise Set #2 Released | **K@W:** How Retailers Can Salvage Customer Loyalty  
[https://knowledge.wharton.upenn.edu/article/retailers-can-salvage-customer-loyalty/](https://knowledge.wharton.upenn.edu/article/retailers-can-salvage-customer-loyalty/) | 1.Strategic Thought Starters (Individual)  
2.Exercise Set #1 (Individual)  
3.Final Project Proposal (Group) |
| TBD  | Customer Life-Cycle Management | **Session 4a:** Customer Retention  
**Session 4b:** Customer Life-Time Value (CLV), Customer Scoring Models, Churn Analysis, Survival Analysis | **HBR:** Which Features Increase Customer Retention? by Rebecca W. Hamilton, Roland T. Rust, Chekitan S. Dev  
**HBR:** The Metrics That Marketers Muddle by Neil Bendle and Charan K Bagga | 1.Strategic Thought Starters (Individual) |
| TBD  | Customer Life-Cycle Management | **Session 5a:** Guest Lecture *Head of Analytics*  
**Session 5b:** CAC to CLV Optimization | **HBR:** ROI for a Customer Relationship Management Initiative at GST  
by Mark Jeffery, Robert J. Sweeney, Robert J. Davis | 1.Strategic Thought Starters (Individual)  
2.Exercise Set #2 (Individual) |
| TBD  | Customer Life-Cycle Management | **Session 6a:** Final Group Presentations  
**Session 6b:** The Future of CRM | **K@W:** One Person, Many Needs: How Customer Centricity Has Changed  
[https://knowledge.wharton.upenn.edu/article/one-person-many-needs-customer-centricity-changed/](https://knowledge.wharton.upenn.edu/article/one-person-many-needs-customer-centricity-changed/)  
**HBR:** HubSpot and Motion AI: Chatbot-Enabled CRM by Jill Avery and Thomas Steenburgh | 1.Strategic Thought Starters (Individual)  
2.Final Presentations (Group) |
### Detailed Session Plan

Note: Prior to Session 1, students are expected to complete assigned readings and turn in answers for Strategic Thought Starters. (Refer to readings listed in Course Schedule.)

**Session 1:**
Main Business Question: Why should we do CRM?

In this lecture, the following topics will be covered in detail:
- Introductions & Overview of the course
- CRM Strategy in Context of Marketing, Growth, and Enterprise Strategies
- CRM Analytics: Frameworks, Definitions, Data Foundations, Analytics Foundations

The following applications may be practiced in-class:
- Heuristic-based Customer Segmentation Models
- Classification Models for ‘Look-A-Likes’ of our Best Customers

Note: Prior to Session 2, students are expected to complete assigned readings and turn in answers for Strategic Thought Starters. (Refer to readings listed in Course Schedule.)

**Session 2:**
Main Business Question: Who are my best customers? How do I productively get more of them?

In this lecture, the following topics will be covered in detail:
- Customer Acquisition Strategies
- CRM Campaign Performance Analysis & Cost Per Acquired Customer (CAC)
- Customer Segmentation Models

The following applications may be practiced in-class:
- Calculating Campaign Performance
- Calculating CAC
- Classification Models for ‘Look-A-Likes’ of our Best Customers

Note: Prior to Session 3, students are expected to complete assigned readings and turn in answers for Strategic Thought Starters, Exercise Set #1, and the group assignment. (Refer to readings listed in Course Schedule.)

**Session 3:**
Main Business Question: How do I develop my customers?

In this lecture, the following topics will be covered in detail:
- Customer Development Strategies
- Customer Behavioral Segmentations
- Propensity Models for CRM Strategies

The following applications may be practiced in-class:
- Clustering Models for Customer Behavioral Segmentations
- Classification Models for Cross-sell/Up-sell strategies
Note: Prior to Session 4, students are expected to complete assigned readings and turn in answers for Strategic Thought Starters. (Refer to readings listed in Course Schedule.)

Session 4:
Main Business Question: How do I retain my customers?

In this lecture, the following topics will be covered in detail:
- Customer Retention Strategies
- Customer Life-Time Value (CLV)

The following applications may be practiced in-class:
- Estimation Models for Customer Scoring
- Estimation Models for evaluating CLV strategies
- Estimation Models to evaluate Churn

Note: Prior to Session 5, students are expected to complete assigned readings and turn in answers for Strategic Thought Starters and Exercise Set #2. (Refer to readings listed in Course Schedule.)

Session 5:
Main Business Question: How do I bring this all of this together?

In this lecture, the following topics will be covered in detail:
- Customer Life-Cycle Strategies
- Customer Value Optimization Strategies

The following applications may be practiced in-class:
- Survival Analysis for customer optimization
- Optimization Models to balance CAC to LTV

Note: Prior to Session 6, students are expected to complete assigned readings and turn in answers for Strategic Thought Starters and the group assignment. (Refer to readings listed in Course Schedule.)

Session 6:
Main Business Question: So now what?

In this lecture, the following topics will be covered in detail:
- Final Group Presentations
- Course Review
- Future Issues impacting CRM:
  - Technologies (Automation, Personalization, Web3.0)
  - Privacy (GDPR, CCPA, Consumer Expectations)
ATTENDANCE, CLASSROOM NORMS AND EXPECTATIONS

You are required to attend each class. If you want an excused absence, please contact OSA and ask them to send me an email (or forward their approval email to me).

Students are expected to adhere to CBS Core Culture in this class by being Present, Prepared, and Participating.

INCLUSION, ACCOMMODATIONS, AND SUPPORT FOR STUDENTS

At Columbia Business School, we believe that diversity strengthens any community or business model and brings it greater success. Columbia Business School is committed to providing all students with the equal opportunity to thrive in the classroom by providing a learning, living, and working environment free from discrimination, harassment, and bias on the basis of gender, sexual orientation, race, ethnicity, socioeconomic status, or ability.

Columbia Business School will make reasonable accommodations for persons with documented disabilities. Students are encouraged to contact the Columbia University’s Office of Disability Services for information about registration. Students seeking accommodation in the classroom may obtain information on the services offered by Columbia University’s Office of Disability Services online at www.health.columbia.edu/docs/services/ods/index.html or by contacting (212) 854-2388.

Columbia Business School is committed to maintaining a safe environment for students, staff and faculty. Because of this commitment and because of federal and state regulations, we must advise you that if you tell any of your instructors about sexual harassment or gender-based misconduct involving a member of the campus community, your instructor is required to report this information to a Title IX Coordinator. They will treat this information as private, but will need to follow up with you and possibly look into the matter. Counseling and Psychological Services, the Office of the University Chaplain, and the Ombuds Office for Gender-Based Misconduct are confidential resources available for students, staff and faculty. “Gender-based misconduct” includes sexual assault, stalking, sexual harassment, dating violence, domestic violence, sexual exploitation, and gender-based harassment. For more information, see http://sexualrespect.columbia.edu/gender-based-misconduct-policy-students.

ASSIGNMENTS

All of your assignment submissions are subject to the CBS Honor Code. Violations of the CBS Honor Code may lead to failing the assignment, failing the course, suspension, and/or dismissal. In order to avoid ambiguity that may lead to unintentional violations of the Honor Code, assignment description types have been standardized and specified below.

<table>
<thead>
<tr>
<th>Type</th>
<th>Designation</th>
<th>Grade</th>
<th>Preparation of submission</th>
<th>Discussion of Submission*</th>
<th>Discussion of Concepts**</th>
</tr>
</thead>
</table>


### A

<table>
<thead>
<tr>
<th>Group Work</th>
<th>Same grade for all group members</th>
<th>By the group</th>
<th>Permitted to discuss (within group)</th>
<th>Permitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual w/ Discussions of Concepts and Submission</td>
<td>Individual grade</td>
<td>Individual preparation</td>
<td>Permitted to discuss; sharing solutions or submission files is not allowed</td>
<td>Permitted</td>
</tr>
</tbody>
</table>

### B

<table>
<thead>
<tr>
<th>Individual w/ Discussions of Concepts Only</th>
<th>Individual grade</th>
<th>Individual preparation</th>
<th>Not permitted to share/discuss solutions or submission</th>
<th>Permitted</th>
</tr>
</thead>
</table>

### C

<table>
<thead>
<tr>
<th>Individual</th>
<th>Individual grade</th>
<th>Individual preparation</th>
<th>Not permitted to share/discuss solutions or submission</th>
<th>Not permitted***</th>
</tr>
</thead>
</table>

The designated group can be either an assigned study group or a self-selected one.

* Submission means any work and/or output pertaining to the specific assignment. If an assignment submission contains a calculation or decision related to a specific set of data and setting, discussing the details how to make this calculation or decision with regard the data/setting is to discuss the submission. Providing another student with a draft of the calculation or decision is sharing the submission.

** Concepts mean any ideas, examples, readings, or other related materials from the class/course. Conceptual discussion should not be based on a specific set of data or setting related to a calculation or decision required in the assignment, but could be based on other related examples, preferably those from class/course materials.

*** As no conceptual discussion is permitted, Type C is akin to a take-home exam.

### OPTIONAL RECOMMENDED READINGS:

The below represents a list of comprehensive reference materials for the analytical practice of CRM. Some of the readings require a more rigorous background in statistics whereas others are meant to be for broader managerial audiences.

   By Don Peppers, Martha Rogers, Philip Kotler (Foreword by)

2. Effective CRM using Predictive Analytics
   by Antonios Chorianopoulos
   by V. Kumar and J. Andrew Petersen

4. Customer Relationship Management
   by Francis Buttle