Syllabus

1. **Course Description**
a. **Title of a Course**: Customer Analytics
b. **Pre-requisites:**
There are no prerequisites.
c. **Course Type** (compulsory, elective, optional): elective
d. **Abstract**:

Data about our browsing and buying patterns are everywhere. From credit card transactions and online shopping carts, to customer loyalty programs and user-generated ratings/reviews, there is a staggering amount of data that can be used to describe our past buying behaviors, predict future ones, and prescribe new ways to influence future purchasing decisions. In this course, four of Wharton's top marketing professors will provide an overview of key areas of customer analytics: descriptive analytics, predictive analytics, prescriptive analytics, and their application to real-world business practices including Amazon, Google, and Starbucks to name a few. This course provides an overview of the field of analytics so that you can make informed business decisions. It is an introduction to the theory of customer analytics, and is not intended to prepare learners to perform customer analytics.

2. Learning Objectives:
Learning objectives of the Customer Analytics course is to provide students the basic tools to:

- understand new insights about customer behavior
- turn data into action
- put data to work.

3. Learning Outcomes:

After completing the course, the student should:
1. Describe the major methods of customer data collection used by companies and understand how this data can inform business decisions
2. Describe the main tools used to predict customer behavior and identify the appropriate uses for each tool
3. Communicate key ideas about customer analytics and how the field informs business decisions
4. Communicate the history of customer analytics and latest best practices at top firms

4. Course Plan

Week 1 – Introduction to Customer Analytics

What is Customer Analytics? How is this course structured? What will I learn in this course? What will I learn in the Business Analytics Specialization? These short videos will give you an overview of this course and the specialization; the substantive lectures begin in Week 2.

Week 2 – Descriptive Analytics

In this module, you'll learn what data can and can't describe about customer behavior as well as the most effective methods for collecting data and deciding what it means. You'll understand the critical difference between data which describes a causal relationship and data which describes a correlative one as you explore the synergy between data and decisions, including the principles for systematically collecting and interpreting data to make better business decisions. You'll also learn

how data is used to explore a problem or question, and how to use that data to create products, marketing campaigns, and other strategies. By the end of this module, you'll have a solid understanding of effective data collection and interpretation so that you can use the right data to make the right decision for your company or business.

Week 3 – Predictive Analytics

Once you've collected and interpreted data, what do you do with it? In this module, you'll learn how to take the next step: how to use data about actions in the past to make to make predictions about actions in the future. You'll examine the main tools used to predict behavior, and learn how to determine which tool is right for which decision purposes. Additionally, you'll learn the language and the frameworks for making predictions of future behavior. At the end of this module, you'll be able to determine what kinds of predictions you can make to create future strategies, understand the most powerful techniques for predictive models including regression analysis, and be prepared to take full advantage of analytics to create effective data-driven business decisions.

Week 4 – Prescriptive Analytics

How do you turn data into action? In this module, you'll learn how prescriptive analytics provide recommendations for actions you can take to achieve your business goals. First, you'll explore how to ask the right questions, how to define your objectives, and how to optimize for success. You'll also examine critical examples of prescriptive models, including how quantity is impacted by price, how to maximize revenue, how to maximize profits, and how to best use online advertising. By the end of this module, you'll be able to define a problem, define a good objective, and explore models for optimization which take competition into account, so that you can write prescriptions for data-driven actions that create success for your company or business.

Week 5 – Application/Case Studies

How do top firms put data to work? In this module, you'll learn how successful businesses use data to create cutting-edge, customer-focused marketing practices. You'll explore real-world examples of the five-pronged attack to apply customer analytics to marketing, starting with data collection and data exploration, moving toward building predictive models and optimization, and continuing all the way to data-driven decisions. At the end of this module, you'll know the best way to put data to work in your own company or business, based on the most innovative and effective data-driven practices of today's top firms

5. Reading List:

Castaño, R., & Flores, D. Consumer Behavior in Emerging Markets. In (Ed.), The Oxford Handbook of Management in Emerging Markets. : Oxford University Press,. http://www.oxfordhandbooks.com /view/10.1093/oxfordhb/9780190683948.001.0001/oxfordhb-9780190683948-e-10. – ЭБС: Oxford Handbooks Online

Trumbull, G. (2010-02-25). Consumer Policy: Business and the Politics of Consumption. In (Ed.), The Oxford Handbook of Business and Government. : Oxford University Press,. http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199214273.001.0001/oxfordhb -9780199214273-e-28. – ЭБС: Oxford Handbooks Online

In this course, information on recommended readings will be provided at the beginning of each module. At the end of each module, we will also give a list of additional resources to help further expand your knowledge on the topics discussed.

6. Grading System:

The final grade is calculated on the basis of: the final exam (100%). The grades will be given on a scale of 1 to 10 throughout the class. All grades, having a fractional part greater than 0.5, are rounded up. greater than 0.5, are rounded up.

7. Guidelines for Knowledge Assessment:
Sample Questions for assessing the quality of knowledge:
1. When would descriptive and predictive results need additional analysis?
2. When the firm can make a choice of different actions to take
3. When there are strategic consumers involved
4. When there are multiple explanations to the same data we observe
5. All answers are correct
6. When there is competition involved

Why does it matter to know how a demand curve was generated?
1. Knowing the truth always helps
2. Correlation does not imply causation
3. It helps find errors in the data
4. We may give a different recommendation for different models

8. Methods of Instruction:
Blended course: On-line lectures (https://www.coursera.org/learn/wharton-customer-analytics) and out-of-class work.

9. Special Equipment and Software Support (if required): PC, internet access