Course Title: Digital Marketing Analytics

Syllabus (Fall 2023)

Instructor: Dr. Ming Chen

Section: MBAD 6284

Date Range: October 16 – December 14, 2023

Instructional format: asynchronous online

Office hours: by appointment (send via email)

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Course Description and Objectives

This is a graduate-level course in Marketing Analytics. With the technological advances and the increasing speed of data-generation in digital era, it is essential and imperative for managers to understand the capabilities and limitations of common analytical tools and gain managerial insights on the patterns and associations in business data in order to make informative decisions.

This course covers important techniques in marketing analytics with a focus on digital marketing applications. The primary purpose of this course is to expose students with the essential data-analysis knowledge, methodologies and hands-on experiences of analytical tools combined with the online discussions and interactive communications to help students develop pragmatic problem-solving skills and learn to apply different tools in different decision-making settings.

The course will introduce the analytical skills and methodologies and topics as follows:

- Big data descriptive analysis
- Data mining analytical skills
- Forecast new product sales
- Customers market segmentation
- Identify customers' needs based on consumers cluster analysis
- Target VIP customers based on predictive analysis
- Evaluate advertising effectiveness
- Identify and apply the optimal pricing strategy

Required Course Materials

- **Required Textbook**: "Marketing Analytics: Data-Driven Techniques with Microsoft Excel," by Wayne L. Winston. Publisher: Wiley, ISBN: 978-1118373439
- **Case reading:** most cases covered in this class would be provided by the instructor and will be posted on Canvas before class
- **Lecture notes:** lecture notes (slides) for each module of the class are well prepared and posted on Canvas. Additional press articles, assigned reading, links to video and other supplementary materials will also be available on the course portal.
- **Software:** Excel (Microsoft Office 2007 or newer)

Recommended Course Materials

Recommended but not required reading materials: As the digital social media landscape moves so fast, there is no required textbook for this course although the following books are recommended for students who are motivated of learning more details about the analytics methodologies:

- Digital Analytics for Marketing. Marshall Sponder and Gohar Khan.
- Microsoft Excel 2016 Data Analysis and Business Modeling. Wayne Winston.
- The essential guide to marketing in a digital world. Rob Stokers

Grading

The following table displays the components contributing the final grade and the corresponding percentage distribution.

Components		Remarks
Discussion Board Questions Engagement (7)	35	Individual
Homework (3)	30	Individual
Case Assignment (1)	5	Individual
Final Exam (1)	30	Individual
Total	**100**	

Note: the number inside of the parenthesis in the "Grading" table represents how many assignments of that component.

Grading Breakdown

The final course grade will be determined by your total score based on all class activities listed in the table above. There is no (+) and (-) for this course. Once the course grades are released, requests without clear evidence for a change would not be considered. Your course grade will be assigned according to the following groups:

A (90.0% - 100.0%); B (75.0% - 89.9%); C (60.0% - 74.9%); U (Unsatisfactory)

Detailed Assignment Description and Requirements

Discussion Board Questions Engagement (35' with 5' for each module)

Given that analytics in digital marketing is an applied subject, the discussion questions that are posted on the discussion board of each module will mainly motivate students to be more engaged with in-class virtual community discussion activities and gain insights from their peers.

Homework (30')

There will be three homework assignments during the course of the semester. The specifics about each assignment will be posted on the date listed in the course schedule. These homework assignments seek to reinforce the concepts, theories and methods that are covered in the lectures and case discussions. In addition, some in-class exercises will be given to provide some hands-on experience on the analytical tools. Assignments can be submitted on time in class or electronically before the scheduled class starts.

Case assignments (5')

This course will cover one case which was carefully selected from the Harvard Business School Cast study pool. This case is data-intensive with the purpose of guiding students to learn associated analytical tools and techniques. All students are expected to read the case and think about the questions assigned by the instructor. Students are encouraged to involve with the discussion questions posted on the discussion board and provide meaningful insight from the case study. The main purpose of the case assignment is to evaluate students' understanding of the case background, the depth of the analysis covered in the case and the ability to generate managerial implications or solutions from the case.

Final Exam (30')

The final exam will count for 30' of the final grade. The purpose of the final exam is to assess your overall understanding of the concepts and demonstrate that you gain certain level of ability to apply the analytical skills and technical competence.

Academic Integrity

The UNC Charlotte Academic Integrity Policy will be followed. The student is responsible for reading and understanding the policy: Students have the responsibility to know and observe the requirements of The UNC Charlotte Code of Student Academic Integrity. This code forbids cheating, fabrication or falsification of information, multiple submissions of academic work, plagiarism, abuse of academic materials, and complicity in academic dishonesty. Any special requirements or permission regarding academic integrity in this course will be stated by the instructor, and are binding on the students. Academic evaluations in this course include a judgment that the student's work is free from academic dishonesty of any type, and grades in this course therefore should be and will be adversely affected by academic dishonesty. Students who violate the code can be expelled from UNC Charlotte. The normal penalty for a first offense is zero credit on the work involving dishonesty and further substantial reduction of the course grade. In almost all cases the course grade is reduced to F. Copies of the code can be obtained from the Dean of Students Office. Standards of academic integrity will be enforced in this course. Students are expected to report cases of academic dishonesty to the course instructor.

Belk College of Business Statement of Diversity

The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

Non-discrimination in the classroom

All students and the instructor are expected to engage with each other respectfully.   Unwelcome conduct directed toward another person based upon that person's actual or perceived race, actual or perceived gender, color, religion, age, national origin, ethnicity, disability, or veteran status, or for any other reason, may constitute a violation of University Policy 406, The Code of Student Responsibility. Any student suspected of engaging in such conduct will be referred to the Office of Student Conduct.

University Policies on Withdrawals

Students are expected to complete all courses for which they are registered at the close of the add/drop period. If you are concerned about your ability to succeed in this course, it is important to make an appointment to speak with me as soon as possible. The University policy on withdrawal allows

students only a limited number of opportunities available to withdraw from courses. It is important for you to understand the financial and academic consequences that may result from course withdrawal.

University's statement on disability accommodations

UNC Charlotte is committed to access to education. If you have a disability and need academic accommodations, please provide a letter of accommodation from Disability Services early in the semester. For more information on accommodations, contact the Office of Disability Services at 704-687-0040 or visit their office at Fretwell 230.

Students in this course seeking accommodations to disabilities must first consult with the Office of Disability Services and follow the instructions of that office for obtaining accommodations.

Policies Related to COVID-19: Face Covering Requirement in Classrooms

(May not apply to the online courses)

It is the current policy of UNC Charlotte that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the 49er community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings in all indoor spaces on campus, including classrooms and labs, regardless of vaccination status. Failure to comply with this policy in the classroom or lab may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Office of Student Conduct and Academic Integrity for charges under the Code of Student Responsibility.

Schedule of Topics and Readings

Module	Covered Topic	Suggested Readings & Assignment Reminder*
1	**Topic**: Forecasting New Product Sales **Case:** TruEarth Healthy Foods Case Study **Hands-on Exercise**: Bass Model to Forecast New Product Sales & Solver Maximization	Syllabus Text book: Chapter 27 Case * Case Assignment 1 (out)
2	**Topic**: Customer Segmentation & Cluster Analysis to Segment Market **Hands-on Exercise:** Identify Customers' Needs and Cluster Analysis using SPSS	Textbook: Chapter 23 *Homework 1 (out) *Case Assignment 1 (due)
3	**Topic:** Targeting VIP Customers **Hands-on Exercise:** Predictive analytics using real retailer data	Textbook: Chapter 19, 20 *Homework 1 (due)
4	**Topic**: Collaborative Filtering and Lead Scoring Model **Hands-on Exercise**: Conducting Lead Scoring model estimation using SPSS	Textbook: Chapter 24, 17 *Homework 2 (out)
5	**Topic**: Price Bundling Strategy **Hands-on Exercise:** Pricing Bundling	Textbook: Chapter 5 *Homework 2 (due)
6	**Topic**: Advertising Analysis (Part I): measure effectiveness of advertising and counterfactual analysis **Hands-on Exercise**: Adstock model	Textbook: Chapter 34 *Homework 3 (out)
7	**Topic**: Advertising Analysis (Part II): an application of Adstock model using real brand data-- Opendoor **Hands-on Exercise**: Measuring the effect of radio ads on online branded searches	Textbook: Chapter 29, 30 *Homework 3 (due)
8	**Final Exam (3 hours)** (Open Notes and Open Book)	Class notes