MKTG 401-001x: Marketing Analytics Capstone: Learning By Doing
Spring 2019, Quarter 3 (.5 CU)
MW 3-4:30, [location]

Faculty

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Office Hours: Tuesday 3:00-4:30pm

Course Description and Learning Objectives

MKTG 401x fulfills the senior capstone requirement, which is the final step of your Leadership Journey at Wharton. In this class you will:

- Apply knowledge acquired through your program of study to assist an actual client organization.
- Practice analytical thinking skills by analyzing and framing business problems, use problem-solving techniques to create business intelligence, all while considering ethical issues.
- Practice written and oral communication skills and [assigned] team-working skills, by leveraging the experience developed earlier in your leadership Journey.
- Reflect on your own social and intellectual development over your time at Wharton and Penn.

Enrollment Requirement: Attendance on the first day of class is mandatory. In addition, since this a project based course, students must decide on whether they would like to drop the class by the end of the first session.

Format

MKTG 401x allows teams of 4-6 students to help client organizations by defining and addressing particular analytics-oriented challenges that the organizations face. An example of a challenge is the following.

Companies are currently spending millions of dollars on data-gathering initiatives — but few are successfully capitalizing on all this data to generate revenue and increase profit. Moving from collecting data to analysis to profitable results requires the ability to forecast and develop a

business rationale based on identified data patterns.

You will delve into how companies can better understand their customer base in order to predict customers' future consumption. You will consider how to build models both to predict churn and to assess customer lifetime value.

The client (Evite – www.evite.com) will discuss the business context of their company as well as the challenges that they use customer analytics to solve. In particular, they will introduce you to problems and a real data set for which you will have access to with your group in order to try to solve one of those problems. After the business context, the problem and data have been introduced, the faculty leader will teach some of the methods that could be used to address the challenges at hand.

You will be exposed to several statistical methods such as linear regression, logistic regression, factor analysis and multinomial regression. You will learn how to use these methods for generating key business insights and making good managerial decisions.

Each group will be assigned a specific problem and work together to develop a statistical model, estimate it, process the results, and make recommendations back to the company based on those results.

Mondays: Plenary lecture and discussion. The faculty leader will provide specific input or tools to facilitate progress. Teams will be expected to provide updates so that shared learning across contexts and teams can occur. All statistical analysis methods covered in class can be implemented in both JMP and R. The lectures will show examples of both programming languages.

Wednesdays: Team meetings with faculty leader. Teams will meet briefly with the faculty leader for specific guidance, and the remainder of the session will be devoted to group worktime.

Materials

Course materials include readings as outlined below in the Class Schedule. The recommended text is Aaker, Kumar, Leone and Day (AKLD) Marketing Research (11th Ed.), Wiley (**ISBN:** 978-1118156636).

Evaluation and Grading

All students will receive a letter grade; there is no pass/fail option. You will be evaluated for 1) participation in class sessions, 2) your group report and presentation to your client, and 3) your individual report reflecting on the problem-solving experience as well as your team dynamics.

1) Class sessions (20%): You are expected to attend each session, arrive on time, adhere to the pre-planned seating charts, and actively participate.

> *Participation.* Because discussion and small group engagement are substantial parts of the course, active participation is essential — for both your own learning and that of the other students.
>
> *Absences*. All absences must be reported through the Course Absence Reports (CAR) system via Penn InTouch. You are responsible for making up class content and/or readings and other preparatory materials for any days that you miss. Should you find that your situation creates extenuating circumstances, please see your instructor to discuss.

2) Client project (50%). You will be assigned to work on a project in a small team [4-6 students] to address an (analytics) issue, problem, or challenge facing a client. The instructor will form the groups. Based on client options, you will be assigned to a client along with other members of your team. Your team will have opportunities to interact with the client during the course, and you will deliver both an oral presentation of your findings and a written report to the client. This work will draw on a range of coursework throughout your time at Penn as well as your individual, interpersonal, and group strengths. In addition, your work will provide you the opportunity to use your creative and critical thinking skills, apply what you have learned, and reflect on the experience.

3) Individual reflection (30%): You will complete an essay with no more than 1250-words describing your learnings from the client project. This reflection should not be limited to the content of your client recommendations; rather, it should focus on your assessment of your group's teamwork and interpersonal dynamics, your group's ability to communicate your spoken and written recommendations, and how the project helped you develop particular skills and/or identify further areas of development.

Please see the "Schedule of Class Meetings" at the end of the syllabus for a draft of the class meeting and in class / out of class discussions.

Academic Integrity

Please re-familiarize yourself with the students' guide to Academic Integrity at Penn (http://www.upenn.edu/academicintegrity/index.html) and the Code of Academic Integrity: "Since the University is an academic community, its fundamental purpose is the pursuit of knowledge. Essential to the success of this educational mission is a commitment to the principles of academic integrity. Every member of the University community is responsible for upholding the highest standards of honesty at all times. Students, as members of the community, are also responsible for adhering to the principles and spirit of the following Code of Academic Integrity." (http://www.upenn.edu/academicintegrity/ai_codeofacademicintegrity.html).

You are encouraged to discuss class topics with other students in the class. However, your individual and group assignments, responses, and contributions to class are to be your own original work and must truthfully represent the time and effort you apply.

Consult with the instructors if you have any questions about academic integrity expectations for this class. If you are unsure whether your work constitutes a violation of the Code of Academic Integrity, it is your responsibility to clarify any ambiguities.

Policies

Seating: Because you will be working in small groups at various (and sometimes unpredictable!) times throughout this class, we will use a pre-planned seating arrangement for this course.

Use of Electronics: To help promote engagement with the course, all phones, tablets, computers, and other electronics for all classes must be turned off and put away out of sight during the entire session (unless you are instructed to do otherwise). This policy will be strictly enforced.

Accommodations: The University of Pennsylvania provides reasonable accommodations to students with disabilities who have self-identified and been approved by the office of Student Disabilities Services (SDS). If you have not yet contacted SDS, and would like to request accommodations or have questions, you can make an appointment by calling SDS 215-573-9235. The office is located in the Weingarten Learning Resources Center at Stouffer Commons 3702 Spruce Street, Suite 300. All services are confidential.

Schedule of Class Meetings (Tentative Schedule)

Session	*Topic, Readings, Cases*
1	Introduction to the course / Evite: Business Context
2	Group Work – Get familiar with Dataset
3	Regression Models - I READING: AKLD – Chapter 19 (Correlations Analysis and Regression Analysis)
4	Group Work – Start working on Modeling
5	Regression Models – II (Interactions) READING: AKLD – Chapter 19 (Correlations Analysis and Regression Analysis)
6	Group Work – Model data using Interactions
7	Logistic Regression Models READING: Advanced Regression Models (on canvas)
8	Group Work – Start working on Churn Models
9	Factor Analysis READING: AKLD – Chapter 20 (Discriminant, Factor and Cluster Analysis)

10	Group Work – Use Factor Analysis to Reduce Data Complexity
11	Segmentation – Cluster Analysis READING: AKLD – Chapter 20 (Discriminant, Factor and Cluster Analysis)
12	Group Work – Look for segmentation / enhance modeling results
13	Feedback on Presentations
14	Presentations to the Client