

Standard Course Outline

MKTG 475 Marketing Analytics

I. General Information

- ♦ Course number: MKTG 475
- ♦ Title: Marketing Analytics
- ♦ Units: 3 credits
- ♦ Prerequisites: I S 301, I S 310, and MKTG 300 (IS 301 waived for Marketing minors)
- ♦ Course Coordinator: Reo Song
- ♦ Date prepared/revised: 04/2020

II. Catalog Description

Marketing Analytics is an application of data science to marketing decision problems. The course explores customer data analysis techniques and their theoretical foundations to help students acquire analytic skills that can be applied to real world marketing problems. The course also examines the ethical and technical issues related to data privacy. Letter grade only (A-F).

III. Curriculum Justification(s)

In the age of Big Data, marketing analytics increasingly plays a fundamental role in business decision making. Marketing analytics enhance the quality of business decision making by helping organizations better understand customers and competitors. The unprecedented growth and availability of customer data, both structured and unstructured, has engendered many challenges that include data acquisition, management, visualization, and analysis.

IV. Course Objectives

- Customer data analysis: Students will learn and implement the various steps needed to obtain insights from customer data analysis. These steps include defining research problems, collecting and managing customer data, conducting appropriate analyses, and interpreting analytic results for marketing insights.
- Theories on customer analytics: Students will learn analytical and customer theories to apply appropriate analysis techniques to given research problems and types of customer data.
- Critical thinking: Student will develop the ability to critically evaluate business problems and to determine the most appropriate analytical technique.
- Strategic thinking: Students will demonstrate how to gain insight from the analysis of data and to recommend an appropriate course of action based on empirical evidence.

- Customer data analysis software: Students will learn a statistical software package appropriate to handling customer data, for example Stata, R, SAS, Matlab, and SPSS.

V. Outline of Subject Matter

The topics listed below are required. Additional topics can be added into the course based on the instructor's personal preferences in teaching this course.

1. Introduction to marketing analytics, predictive analytics, and Big Data
2. Basics of a statistical software package: How to import, clean, and manipulate data for analysis
3. A/B testing
4. Linear regression for prediction
5. Price elasticity and pricing strategy
6. Segmentation and targeting through customer analytics
7. Social media analytics
8. Information privacy and related ethical issues/implications

The following topics can be added:

- Customer lifetime value (CLV)
- Prediction study design
- New product analytics: Conjoint analysis
- Time series analysis for forecasting: Autoregressive model and exponential smoothing
- Machine learning: Decision trees, Bagging, Random forests, Boosting, Ensemble, Regularized regression, Cluster analysis, etc.

VI. Methods of Instruction

A. Instruction Mode

- Traditional
- Hybrid
- Local Online
- Distance Education

B. Classroom Activities

The course should include the following components:

- In-class data analysis exercises
- Real world case analysis assignments with large scale secondary data that includes the recommendation of an appropriate course of action



- Course group project: Define business problem, collect and clean data, apply an analytic method, and recommend a course of action. Data analysis project with a client can be accommodated as this group project.
- Examinations preferably use short answer questions, essays, and must require some form of application, critical thinking, and / or integrations of concepts. Multiple-choice questions should be less than 50% of the total exam points. If multiple-choice questions are used, they should predominantly focus on concept and technique application, not simple recall or recognition.

VII. Information about Textbooks/Readings

There is no standardized textbook. The textbooks and articles are recommended as a reference:

- [OpenIntro Statistics 3e](#)
- "Regression Analysis," David Bell, Harvard Business Review 1993
- "Logistic Regression," Rajkumar Venkatesan and Shea Gibbs, Darden Business Publishing 2014
- "Customer Profitability and Lifetime Value," Elie Ofek, Harvard Business Review 2014

VIII. Instructional Policies Requirements

A. Grading Policy:

- Final course grades shall be based on at least three (3), and preferably four (4) or more, demonstrations of competence by the student. In no case shall the grade on any single demonstration of competence count for more than one-third of the final course grade.
- Examinations preferably use short answer questions, essays, and must require some form of application, critical thinking, and / or integrations of concepts. Multiple-choice questions should be less than 50% of the total exam points. If multiple-choice questions are used, they should predominantly focus on concept and technique application, not simple recall or recognition.
- See [Academic Senate Policy Statement 12-03: Final Course Grades, Grading Procedures, and Final Assessments](#).

B. Policy on Classroom Behavior:

- All cell phones & other electronic devices (e.g., pagers, iPads, iPods, PDAs) must be put on vibrate or turned off and not on your desk during class.
- Students are responsible for what transpired if they miss a class. It is the student's responsibility to contact the instructor or a classmate to determine what was missed. See "Policy on Make-up Exam and Assignments" below.



- Talking and other disruptive behavior are not permitted while classes are in session.
- Students are expected and must do ORIGINAL work for all assignments, including exams. See “Academic Integrity” policy below. It is the student’s responsibility to notify the professor in advance of a need for accommodation of a disability that has been verified by the University.
- See also [Department of Marketing Classroom and Online Conduct Policies](#).

C. Policies on Withdrawal, Late Withdrawals, and Incompletes:

The University policy on dropping and withdrawal from classes is set forth in the schedule of classes. Students are obligated to officially withdraw from their courses even though they may not have attended. Withdrawals require the signature of the instructor, the chairperson, and the Dean of the COB.

D. Academic Integrity:

- Students are expected to do original work for all assignments, including exams.
- Students are responsible for their own conduct and all cases of dishonesty (e.g., plagiarism, cheating) will be reported to the proper university officials.
- Students are expected to adhere to the [College of Business policy on academic integrity](#) and the University’s [Academic Senate Policy Statement 08-02: Cheating and Plagiarism](#). Please avoid an embarrassing or unfortunate situation.

E. Campus Computer/Network Usage:

Careful and ethical use of computing resources is the responsibility of every user. As a user of these resources, you agree to be subject to the guidelines of the “[Policy Governing Access to and Use of CSULB Computing Resources](#)”. These guidelines apply to all computing resources provided by the University; some guidelines are more directly related to time sharing systems, some to microcomputers and local area networks, and some to all systems.

IX. Disabilities:

The [Bob Murphy Access Center](#) (BMAC) provides certification for students with disabilities and helps arrange relevant accommodations. Any student requesting academic accommodations based on a disability is strongly encouraged to register with Disabled Student Services (BMAC) each semester. A letter of verification for approved accommodations can be obtained from BMAC. Please be sure to provide your instructor with BMAC verification of accommodations as early in the semester as possible. The phone number for BMAC is (562) 985 5401. The email address is: bmac@csulb.edu.

X. Assistive Technology

In compliance with [Accessibility and Faculty Responsibility for the Selection of Instructional Materials \(PS 08-11\)](#), instructors are responsible for ensuring that their syllabi and instructional materials are accessible to all students.

XI. Consistency of SCO Standards across Sections

All future syllabi will conform to the SCO. The course coordinator should review the SCO and offer advice and/or materials to faculty member new to teaching the course. The course coordinator may offer or require regular review of instructors' course materials as well as anonymous samples of student work.

XII. Additional Resources for Development of Syllabi

- [Academic Senate Policy 11-07: Course Syllabi and Standard Course Outlines](#)
- College of Business [Accessible Syllabus Template](#)
- Faculty Center [Course and Syllabus Design](#)