



Course MKT 6353.501 Customer Insights & Analytics
Professor Nanda Kumar, PhD
Term Spring 2020
Meetings R 7:00-9:45 p.m., JSOM 2.903

Professor's Contact Information

Email Address	nkumar@utdallas.edu
Office Phone	972-883-6426
Office Location	JSOM 13.506
Office Hours	Before class, by appointment

General Course Information

Pre-requisites, Co-requisites, & other restrictions	MKT 6301 Marketing Management and OPRE 6301 Statistics, knowledge of basic marketing / strategy, statistics and some familiarity with computer based data analysis.
Course Description	<p>This course prepares students for a career in marketing analytics.</p> <p>Students will learn to use data and output from a model (not necessarily DOING the model) to deliver action-able insights to marketing decision makers.</p> <p>Students will become familiar with typical marketing questions and decisions made by senior market managers.</p> <p>Students will be exposed to frameworks for deriving insights, e.g. category management, segmentation, price sensitivity, experimental design/test and learn plans, customer lifetime value, financial implications, satisfaction approaches, etc.</p> <p>Students will focus on interpretation of results and thinking like a marketing client.</p> <p>The case student method will be employed.</p>
Learning Outcomes	<p>Take analytic output and derive actionable marketing insights</p> <p>Apply test and learn plans to mitigate risk</p> <p>Put together an insights story focusing on implementation</p> <p>Calculate financial implications of marketing actions</p> <p>Think like a senior marketer</p>
Required Texts	Handbook of Statistical Analysis by by Geoff Der and Brian S. Everitt

Tentative Assignments & Academic Calendar

Date	General Topics	wk	Chapters
01/16	1 General Overview	1	Syllabus
01/23	<p>What is an insight?</p> <p>Brief / conceptual review of statistics Focus on consumer behavior Introduction to marketing strategy Statistical Testing</p> <p>How to do a case study</p>	2	Handouts
01/30	<p>ANALYSIS: clustering STRATEGY: segmentation</p> <p>CASE 1 (FFW) <i>What does my market look like?</i> <i>Can I develop a plan and attack each sub-segment or can I de-market some part of my database as not worth the effort?</i> <i>How do I test the success / mitigate the risk of whatever plan is developed?</i> <i>How can I use category management?</i></p>	3	
02/06	<p>ANALYSIS: ordinary regression, elasticity modeling STRATEGY: discount optimization</p> <p>CASE 2 (TGIF) <i>Are all of my customer equally sensitive to price?</i> <i>Do they all need a discount in order to maximize probability to purchase?</i> <i>Are customers differently sensitive to price of the product, or different times of the season?</i> <i>Do I have to give away so much margin?</i> <i>Can I personalize/target particular discounts?</i></p>	4	
02/13	<p>ANALYSIS: logistic regression STRATEGY: market basket, lift / gain charts</p> <p>CASE 3 (SKO) <i>How do I target? How do I find my best customers?</i> <i>I need a list of those most likely to respond to an offer, to purchase, to visit, etc.</i> <i>What about market basket? How should I bundle products?</i> <i>How do I know how deep to mail? What is the cost of being wrong?</i></p>	5	

02/20	ANALYSIS: Logistic Regression STRATEGY: Prospecting, Targeting, Lead Generation (2 segments)	6	
02/27	ANALYSIS: Discriminant Analysis STRATEGY: Prospecting, Targeting, Lead Generation (more than 2 segments)	7	
03/05	ANALYSIS: survival modeling STRATEGY: churn strategy CASE 4 (Telco) – Due 04/02 <i>How can I understand what causes churn?</i> <i>Who is most at risk of churn? How do I slow down attrition?</i>	8	
03/12	ANALYSIS: Panel Regression STRATEGY: Media Mix Modeling and Same Store Sales CASE 5 (HUM) – Due 04/09 <i>What most contributes to my stores' sales?</i> <i>How do I account for each stores' individual differences?</i> <i>Does direct or mas media drive more revenue?</i> <i>What percentage of my budget should be allocated to each media?</i>	9	
04/02	ANALYSIS: Time Series Regression STRATEGY: MMM & Marcom Valuation / PDL CASE 6 (JAS) – Due 04/16 <i>How does time effect impact? Can I account for lags?</i> <i>What increases should happen in budgets given medias impact?</i>	10	Handouts
04/09	ANALYSIS: ordinary regression, simultaneous equations STRATGEY: customer satisfaction CASE 7 (EQ/RQ) – Due 04/23 <i>How can I increase my customer's overall satisfaction?</i> <i>What do I do about my competitors doing better than I do?</i>	11	Handouts
04/16	Conjoint Analysis	12	
04/23	Introduction to Machine Learning	13	
04/25	Final Test		

	<p>official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.</p>
Withdrawal from Class	<p>The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.</p>
Student Grievance Procedures	<p>Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's <i>Handbook of Operating Procedures</i>.</p> <p>In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.</p> <p>Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.</p>
Incomplete Grades	<p>As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of <u>F</u>.</p>
Disability Services	<p>The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.</p> <p>The contact information for the Office of Disability Services is: The University of Texas at Dallas, SU 22 PO Box 830688 Richardson, Texas 75083-0688 (972) 883-2098 (voice or TTY)</p> <p>Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.</p> <p>It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals</p>

	requiring special accommodation should contact the professor after class or during office hours.
Religious Holy Days	<p>The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.</p> <p>The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.</p> <p>If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.</p>
Off-Campus Instruction and Course Activities	<p>Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean.</p>

These descriptions and timelines are subject to change at the discretion of the Professor.