Predictive Analytics for Data Science
Course Syllabus

Course Information

Course Number/Section	MKT / BUAN 6337. 0w1 / 0w2 / sw1 / sw2
Course Title	Predictive Analytics for Data Science
Term	Fall 2022

Professor Contact Information

Professor	Dr. Upender Subramanian
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Teaching Assistant(s)	Anmol Madan (anmol.madan@utdallas.edu), Ehsan Saremi (ehsan.saremi@utdallas.edu). TBD
Online Office Hours	-

Course Modality and Expectations

Instructional Mode	Online Asynchronous (No live / in-person contact hours) **IMPORTANT:** Exams to be taken at announced dates in-person at a UTD approved testing center.
Course Platform	Elearning for all interactions including Recorded lectures, Discussion board, Homeworks
Expectations	See course introduction announcement on eLearning for detailed expectations. Being an asynchronous online course, the students bear the main responsibility for learning.
Asynchronous Learning Guidelines	All students complete the course asynchronously (with the exception of the exams as noted above). This online course format is primarily intended for students with schedule constraints such as on internships or full-time jobs that prevent them from attending classes during the day or on a set schedule. For this reason, recorded lectures are posted through eLearning and students are responsible for watching them asynchronously per the weekly schedule. Student questions are answered through the eLearning discussion board.

COVID-19 Guidelines and Resources

The information contained in the following link lists the University's COVID-19 resources for students and instructors of record.

Please see http://go.utdallas.edu/syllabus-policies.

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Students are not allowed to share the copy or share the recorded lectures. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Materials

The Instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Course Pre-requisites, Co-requisites, and/or Other Restrictions
OPRE 6301

Course Description
This course is designed for a career in marketing analytics in which students analyze data to make important marketing decisions. These methods are commonly employed in online marketing, database marketing and retailing.

Student Learning Objectives/Outcomes
Upon completion of the course, students will be proficient in use of SAS for empirical estimation of commonly used marketing predictive models.

Required Textbooks and Materials
Required Texts
N/A
Required Materials
N/A

Suggested Course Materials
Suggested Readings/Texts

The Little SAS Book: A Primer by Lora Delwiche and Susan Slaughter (Edition 4 or later).The UTD Library has an e-copy of the 5th edition of the book available for online browsing at https://utdallas.primo.exlibrisgroup.com/permalink/01UT_DALLAS/2hgl0t/alma9927850099901421. (Check through the library website directly if the link does not work. You may need to first sign in to the UTD library account using your NET ID to access this link).

Suggested Materials
SAS Programming Manuals (available online from SAS website)

Textbooks and some other bookstore materials can be ordered online or purchased at the UT Dallas Bookstore.

Technical Requirements
In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements on the Getting Started with eLearning webpage.

Access to SAS Server
The course requires extensive use of the software package SAS. You can either purchase a personal copy of SAS, or use SAS through remote access to a university server. All students registered for this course will be provided an account on the SAS server. The server details will be posted on elearning. You can connect to the server using the Remote Desktop Connection (on a Windows PC) or other compatible software.

You can login remotely to this server either from on-campus or off-campus. Off-campus access requires that you connect to the UTD VPN. Details for obtaining UTD VPN access is available at https://www.utdallas.edu/oit/vpn/. Contact the OIT Help Desk for any support regarding VPN.

Course Access and Navigation
This course can be accessed using your UT Dallas NetID account on the eLearning website.

Please see the course access and navigation section of the Getting Started with eLearning webpage for more information.

To become familiar with the eLearning tool, please see the Student eLearning Tutorials webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The eLearning Support Center includes a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

Communication
This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the Student eLearning Tutorials webpage for video demonstrations on eLearning tools.

This course heavily relies on discussion board forums for interactions. There are **three discussion board forums** available for you on e-learning

- Student Introductions – where you are encouraged to introduce yourselves to me and to the other students.
- Student Lounge – where you can communicate with other students, ask them questions, offer your help etc.;
  and
- Questions for Professor /TA – where you can ask me or the TA questions

IMPORTANT: I prefer that you communicate with me through the discussion board on e-learning and <u>not through email</u>. The reason is that I have a lot of students and very often students ask similar questions. It's more efficient for me to answer a question once and make the answer available to all students in the course. In addition, this way you can also see all the questions and answers that had been provided and learn from it.

Student discussion board messages and emails will be answered either by me or the TA within **2 working days** under normal circumstances. Emails are to be used for personal or confidential matters. **Messages or emails will not be usually responded to over weekends.**

Of course, if you want to contact me regarding a personal matter – send me an email, but otherwise I expect all communications to be done through "Questions for Professor/TA" on e-learning.

Distance Learning Student Resources
Online students have access to resources including the McDermott Library, Academic Advising, The Office of Student AccessAbility, and many others. Please see the eLearning Current Students webpage for more information.

Server Unavailability or Other Technical Difficulties
The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online eLearning Help Desk. The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

Assignments & Academic Calendar

WEEK	TOPIC/LECTURE	ACTIVITY	DUE DATE
1: Aug 22 – 28	Lecture 1: SAS Basics	Homework #1	Sep 9
2: Aug 29 – Sep 4	Lecture 2: Descriptive Analysis and Hypothesis Testing	Homework #2	Sep 16
3: Sep 5 – 11 **4: Sep 12 – 18**	Lecture 3: Linear Regression I Lecture 4: Linear Regression II	Homework #3	Sep 23
5: Sep 19 – 25	Break / Review before Exam 1	Review questions posted on Elearning	
6: Sep 26 – Oct 2	Exam – 1 (for Lectures 1 to 4)	Exact date / time to be announced	
7: Oct 3 – Oct 9	Lecture 5: Model Evaluation and Selection		
8: Oct 10 – Oct 16	Lecture 6: Logistic Regression	Homework #4	Oct 28

9. Oct 17– Oct 23 **10. Oct 24 – Oct 30**	Lecture 7: Multinomial & Ordered Logit Regression	Homework #5	Nov 11
11. Oct 31 – Nov 6	Lecture 8: Conjoint Analysis		
12: Nov 7 – Nov 13	Lecture 9: Limited Dependent Variables		
13: Nov 14 – Nov 20	Break / Review before Exam 2	Review questions posted on Elearning	
Nov 21 – Nov 27: THANKSGIVING BREAK, HAPPY THANKSGIVING !!!			
14: Nov 28 – Dec 2	Exam – 2 (for Lectures 5 – 9)	Exact date / time to be announced	

HOMEWORKS

You will have FIVE homework assignments. The homework due dates are given in the course schedule above. Assignments must be submitted electronically as ONE zipped file. **Submissions must include all necessary SAS program file, SAS outputs as necessary to show the desired results (screen captures or as a text / word file). The SAS program files should be able to run as is in the unzipped folder - include suitable library names definitions in the program file, and necessary data files in the zipped folder**. You will receive a 0 credit for assignments submitted without the code and output. No exceptions.

IMPORTANT: You are allowed to discuss the homework with your fellow classmates as well as refer to any generic online sources. **However, homeworks must be completed independently and only original attempts must be submitted. Copying from others of from past solutions will be considered cheating.** A score of 0 will be assigned if it is determined that a student was cheating. Further disciplinary actions may also be initiated.

GROUP WORK & PEER EVALUATION

You will complete the homeworks in groups of **five**. Groups will be formed at the start of the semester following the process that will be announced by the instructor at the start of the semester.

IMPORTANT: All members of the group are expected to contribute EQUALLY to most if not all homework assignments. A peer evaluation will be conducted at the end of the semester to verify that all members contributed equally. **Those assessed by peers as not contributing sufficiently will be penalized by deducting points for the homework as determined by the instructor.**

EXAMS

There will be two in-person exams in this course. You will need to take these exams at the announced dates and time window at a UTD approved testing center. Dates and time window for the exams will be announced in the first week of the course.

IMPORTANT: You bear the responsibility of locating a UTD approved testing center and reserving a seat at that center to take the exam on the assigned date within the assigned time window. If you fail to reserve a seat for the exam for whatever reason, then you will miss the exam and receive zero points on that exam.

Exams at UTD Testing Center: Students can take the exams at the UTD testing center. Please see https://ets.utdallas.edu/testing-center and https://ets.utdallas.edu/testing-center/students/ for more details. Please email the testing center with all questions about the logistics of reserving a seat.

Exams at Off-site (non-UTD) Testing Center: Students can also take the exam at any other UTD approved testing center. Please see https://ets.utdallas.edu/testing-center/distance-learning/ for details. Please contact the off-site testing center for any center-specific questions and procedures. It is your responsibility to make all arrangements as per the off-site testing center and UTD testing center requirements.

IMPORTANT: If taking the exam at a UTD approved off-site testing center then in addition to reserving a seat at that center, you are responsible for completing an application for the same at the UTD testing center 3-4 calendar weeks in advance. (**NOTE**: The stated requirement is 15 business days in advance. BUT 15 business days is NOT 2 calendar weeks!!! Also Labor day, Thanksgiving and other university holidays do not count towards business days. So 15 business days is at least 3 calendar weeks and longer if there are holidays in between. No student has successfully argued against this with the UTD testing center. **Your ONLY alternative if you miss this cutoff date is to travel to Dallas to take the exam at the UTD testing center**).

Proctored Exam Procedures

You will follow the procedures of the testing center where you take the exam.

Grading Policy
Grade Scale: A, A-, B+, B, B-, C+, C, F

Grades will be based on your total score (out of 100 points) from two exams (25 points each) and FIVE homework assignments (10 points each). The cutoffs for different grades based on the total score is as follows:

A : 90 and above

A- : 86 – 89

B+: 82 – 85

B : 78 – 81

B- : 74 – 77

C+ / C / C- : 50 - 73, as determined by the instructor

F: Less than 50

Course Policies
Make-up exams
Not Allowed

Extra Credit
None

Late Work
Not Allowed

Special Assignments
None

Class Participation
N/A

Classroom Citizenship
N/A

Comet Creed
This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

Academic Support Resources
The information contained in the following link lists the University's academic support resources for all students.

Please go to Academic Support Resources webpage for these policies.

UT Dallas Syllabus Policies and Procedures
The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to UT Dallas Syllabus Policies webpage for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.