Course Syllabus

Course Information

Course Number/Section	MKT / BUAN 6337.0w1
Course Title	Predictive Analytics for Data Science
Term	Spring 2026

Professor Contact Information

Professor	Dr. Upender Subramanian
Office Phone	972-883-6525
Email Address	upender@utdallas.edu
Office Location	JSOM 13.508
Teaching Assistant(s)	Krishnendu Pain (Krishnendu.Pain@UTDallas.edu)
Office Hours	Appointments by Email

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 **IMPORTANT: To access your course content, complete the Virtual Learning Launchpad in eLearning. Follow these instructions: Student JSOM Virtual Learning Launchpad Instructions** **The certificate must be completed each academic year and uploaded each semester for all synchronous / asynchronous courses. The Launchpad will be available before your course starts.**
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.

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 Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility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 the 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).

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

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

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 with 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 log in 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 are 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), an 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.
- *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 not through email. 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 have 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 appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and 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

NOTE: YOU WILL NOT HAVE ACCESS TO THE COURSE TILL YOU COMPLETE VIRTUAL LEARNING LAUNCHPAD.

WEEK	TOPIC/LECTURE	TASKS	DUE DATE
1: Jan 20 – 24	Lecture 1: SAS Basics	Complete Virtual Learning Launchpad on eLearning to access course	ASAP
		Check SAS Server Access	Jan 24
		Form Groups	Jan 26
2: Jan 25 – Jan 31	Lecture 2: Descriptive Analysis & Hypothesis Testing	**Homework #1**	Feb 2
3: Feb 1 – 7	Project work – Data Cleaning, Exploratory Analysis	**Preliminary Project Proposal**	Feb 16
4: Feb 8 – 14 **5: Feb 15 – 21**	Lecture 3: Linear Regression I Lecture 4: Linear Regression II	**Homework #2**	Feb 23
6: Feb 22 – Feb 28	Lecture 5: Model Evaluation and Selection	**Final Project**	Mar 2

		Proposal	
7: Mar 1 – Mar 7	Break before Exam 1		
8: Mar 8 – 14	Exam – 1 (for Lectures 2 to 5)	**Exam: Mar 9 @ Test Center (UTD / UTD-Approved Center)** **HonorLock NOT Allowed Under ANY Circumstance**	
SPRING BREAK!			
9: Mar 22 – 28	Lecture 6: Logistic Regression		
10: Mar 29 – Apr 4 **11: Apr 5 – 11**	Lecture 7: Multinomial & Ordered Logit Regression	**Preliminary Project Report**	Apr 6
12: Apr 12 – 18	Lecture 8: Conjoint Analysis		
13: Apr 19 – 25	Lecture 9: Limited Dependent Variables	**Final Project Report**	Apr 20
14: Apr 26 – May 2	Break / Review before Exam 2		
15: May 3 – May 9	Exam – 2 (for Lectures 6 to 9)	**Exam: May 4 @ Test Center (UTD / UTD-Approved Center)** **HonorLock NOT Allowed Under ANY Circumstance**	

HOMEWORKS

You will have TWO homework assignments. Each HOMEWORK accounts for 10 points. 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 / R / Python program files, and outputs as necessary to show the desired results (screen captures or as a text/word file). The 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, homework must be completed independently, and only original attempts must be submitted. Copying from others of 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.

PROJECT WORK

You will work on a project based on data from a real-world business. The dataset for the project along with the detailed description of the data will be available via eLearning. The project deliverables and due dates are given in the course schedule above. As described in the case of homeworks, you will submit one self-contained zip file with all necessary files. You can use any combination of SAS / R / Python to carry out the analysis for project.

The project proposal and project report are each broken into two deliverables (preliminary and final) to allow for you to obtain and incorporate feedback as you progress through the project.

Project Proposal (5 + 10 Points): PPT Format. 10-15 slides. Supporting documentation and explanations as needed as separate files.

(i) propose two distinct questions you will answer through the analysis in your project,

(ii) for each of these two questions, convince me about the value of answering the question - for example, what kind of insights will your analysis provide and importantly how will these insights your results help / be of practical use to a manager. Note that we are mostly interested in answering questions that have some practical value to a business or manager. We could answer questions about how consumers behave in response to certain key actions of the business.

iii) for each of these two questions, convince me that the question can be answered sensibly using this dataset - for example, what analysis / model you will employ, are there any limitations or problems in using this data and /or analysis method to answer the questions you want to answer. you will need to present some preliminary analysis for this part to support your arguments.

The project description document has some potential ideas and you can build on these or come up with something completely new. Note that the potential ideas in the project description may not all be equally sensible or feasible.

Project Report (5 + 10 Points): PPT Format. 15-20 slides. Supporting documentation and explanations as needed as separate files.

(i) present the question you will answer and why this is of value to answering (similar to the proposal)

(ii) present your analysis and results, and how you verified the model is properly estimated so that the results are reliable and can be properly interpreted

(iii) discuss your findings and insights how these can be helpful or of practical value, discuss recommendations if any.

IMPORTANT: I am not looking for the longest report or the most complicated or advanced analysis. I want to see how you can think creatively and sensibly about practical questions and how you translate these questions to suitable analysis that can be correctly applied to the data available and to interpret the results correctly to develop sensible answers for the question of interest. That said, I expect that you will be developing some regression-based analysis for the

final project. Hypothesis testing are suitable for the initial exploratory analysis or proposal stage analysis and can be used to motivate the questions or the later analysis you conduct.

GROUP WORK & PEER EVALUATION

You will complete the homework and projects in groups of **FOUR**. You will form groups at the start of the semester through eLearning. While you can choose to work individually or in smaller groups, keep in mind that the homeworks and project require extensive work.

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**.

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.

- Begin registering for their exams as soon as Spring classes begin (**recommended**), or **no later than 48 hours** prior to the exam time via this link https://ets.utdallas.edu/testing-center/students/. **Seats fill up early!!**
- Review the **Student Guidelines** prior to taking their first exam at the center. (eg. a UTD ID is the only allowed form of identification).
- Verify that you received a confirmation email upon registering.
- ARC students with approved accommodations should review the ARC Testing Guidelines prior to taking their exam at the center.
- Email infotestingcenter@utdallas.edu with any questions pertaining to testing at the UTD Test center.

Exams at Off-site (non-UTD) Testing Center: Students can also take the exam at any other UTD-approved testing center.

- Review and complete the step-by-step instructions on **https://ets.utdallas.edu/testing-center/distance-learning/.**
- Submit the off-campus online proctored exam application form early and in advance, **no later than 10 business days** (deadline is **strictly enforced, no exceptions!**) prior to the exam date.
- Verify that you received a confirmation email upon registering.
- Email **tcdl@utdallas.edu** directly with questions pertaining to off-campus testing.

IMPORTANT: No student has successfully argued against any of the above requirements of the UTD testing center. **No makeup exams will be offered if you forget to register on time at a testing center. If you miss the cutoff date for completing the formalities for an off-site testing center, your ONLY alternative 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) consisting of your scores from two exams (50 points total) and from FIVE homework assignments (10 points each). The cutoffs for different grades based on the total score is as follows:

A: 90 and above

A-: 85 – 89

B+: 80 – 84

B: 75 – 79

B-: 70 – 74

C+ / C: 50 - 69, 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 Attendance
The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.

Class Participation
Regular class participation is expected. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to university requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the *Student Code of Conduct*.

Class Recordings
Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the AccessAbility Resource Center has

approved the student to record the instruction, students are expressly prohibited from recording any part of this course. 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 AccessAbility Resource Center accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Note: if the instructor records any part of the course, then the instructor will need to add the following syllabus statement:

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

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.