Web Analytics (Online Course): BUAN6344.0W1/MIS 6344.0W1

Fall 2021

AMIT MEHRA

Professor of Information Systems

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Online Office Hours: Please take an appointment by emailing the instructor. The meetings will be scheduled remotely over Microsoft Teams.

TA: Luoying Chen

TA email: luoying.chen@utdallas.edu

Course Instruction mode: Online course

Course Platform: e-Learning and MS Teams

Expectations from students: It is extremely important to be regular and engaged in class. Students must complete listening to all lectures every week and also complete any assigned submissions or quizzes in a timely manner. Please refer to the e-learning site regularly to keep abreast of announcements and updates.

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Recordings may not be published, reproduced, or shared with those not in the class. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Course Description
The emergence of social and digital media has resulted in unprecedented access to vast amounts of data about products, firms, and consumer behavior. Due to this, some traditional strategies are now completely outdated, others have been deeply transformed, and new strategies are continuously evolving. Today, the fact is that all the core business activities such as new product design, advertising, sales and customer service have been affected.

In this course, we aim to develop an understanding of the different types of data that can be collected from digital channels, and how this data can be used to formulate data driven strategies for the firm in order to optimize their business models, websites and digital marketing initiatives.

Course Pre-requisites, Co-requisites, and/or Other Restrictions
None

About the Instructor
Amit Mehra is a tenured professor at JSOM in UT Dallas. His research focuses on how technology shapes human behavior and the resulting impact on firm strategies in different contexts like retail and education. He publishes his work on these subjects in leading journals like *Management Science*, *Information Systems Research*, *Management Information Systems Quarterly* and *Production and Operations Management*. He has won numerous nominations and awards at prestigious conferences like the Workshop on Information Systems and Economics (WISE), Conference on Information Systems and Technology (CIST) and Workshop on Information Technology and Systems (WITS). For his research, Amit works, or has worked in the past with several firms like Infosys, Nordstrom and Nowfloats, and with governments like the Education department of the government of Andhra Pradesh in India. He teaches or has taught courses related to digital and social media marketing and web analytics to undergraduate, masters and PhD students as well as executives in US and India.

Student Learning Objectives and Outcomes
The objectives of the course are:
1. Appreciate different types of digital media and their role.
2. Understand how data drives a firm's deployment of digital media.
3. Learn data analytics techniques to analyze data generated from digital media.

Course materials
We will be using several cases and readings. All students are **required to purchase case materials**. The **readings are optional** and may be used for supplementing lecture material if a student wants. Two separate links to purchase these cases and readings are available on eLearning.

There is **no required textbook** for the course.

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

Communication
For any communication, please use E-learning e-mails only. Otherwise, your email may be missed, and you may not receive any response. The instructor will reply to emails as soon as possible, but sometimes responses may take up-to 3 working days.

The instructor and the TA will post several announcements during the course of the semester on E-Learning and you are responsible for checking the course website regularly to ensure that you are up-to date with announcements.

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.

Student groups

Students are required to form **groups of 3-4 students from the class. The deadline to form the groups is specified on e-Learning in the Project Details folder**. Do not form groups of more than 4. This group must remain the same throughout the semester for all group tasks.

You will be provided with a peer-evaluation form towards the end of the semester to evaluate your peers. Any student who does not participate fairly in the group tasks is likely to receive bad peer evaluations from others in the group. In such a case, the student's score for peer evaluation will be suitably reduced.

Group Assignments

Several group assignments will be specified during the semester. **Assignments are due by the specified dates and must only be submitted on the E-Learning site.** All group assignments must be submitted by a single student from each group. **Direct email submissions to the instructor or the TA will not be accepted. Assignments submitted after the deadline will be considered late and given a zero. Completing assignments on time is 100% a student's responsibility. No make-ups will be given for missed assignments.**

Group Project:

Students are required to do a group project. Details about the project will be specified on E-Learning.

Quizzes
To enforce more systematic approach to studying, there will be **three major quizzes**. The quizzes are non-cumulative. For each quiz, students will be responsible for making themselves familiar with the materials discussed in the lectures, the lecture slides, all assigned readings and any additional material discussed and/or posted on the E-learning site. Students cannot consult any materials or cheat sheets during these quizzes.

In addition to the quizzes above, there will be **a short quiz after each class.** These quizzes are given weekly and are based on the lecture material for that week. Students are allowed to consult lecture materials etc. to attempt these quizzes.

The quiz schedule for the three major quizzes is specified in the academic calendar below. Each quiz will have a **time window of 24 hours during which a student may commence the quiz** after it is posted. Once the student commences his/ her attempt at the quiz, it must be **completed in single attempt in the length of time specified** for that quiz.

A make-up quiz can only be given for medical reasons certified by a doctor. **However, such a quiz may be in a different format than the original quiz.**

Required Software:

We will use **excel** extensively in this class. Students are encouraged to use Tableau or R as needed.

Topics

1. **Multiplicity of digital media**: The landscape of digital media and digital analytics.

2. **Customer tracking:** How do firms track customers? How is this tracking data used?
3. **Optimizing owned media:** How do search engines create search results? What implication does this have for a website owner? How can search engine optimization (SEO) be used to optimize websites for discoverability by a search engine?
4. **Optimizing paid media:**
   a. How can search engine marketing (SEM) be used most effectively?
   b. What is the display advertising ecosystem and how can analytics be used to deploy display advertising most effectively?
5. **Digital Experiments:** How can A/B experiments be designed to harness digital media? How have experiments been used in practice?
6. **Digital media analytics tools:** There are several tools, both free and paid, that are available to collect and analyze digital data. We will study some such tools e.g. Google Analytics and Google Ads etc. How is digital data collected by these tools, and what kinds of insights can be acquired to optimize the use of digital media?

Academic Calendar:

Week No.	Topic
1	Role of digital media in consumer journey
2	Search Engine Marketing (SEM)
3	Programmatic Advertising + Google Ads
4	Google Ads
5	**Major Quiz 1**
6	Google Ads
7	Google Ads + Application of regression analysis to web data
8	Search Engine Optimization (SEO)
9	**Major Quiz 2**
10	A/B Testing
11	Google Analytics
12	Google Analytics
13	Optimizing digital media budgeting
14	**Student project presentations due**
15	**Major Quiz 3**

NOTE(s) :
No lectures are assigned during the weeks of the major quizzes and the project presentation.

Extra Grade Assignments:

1. There are several Google Ads certification assessments available. More information about how to prepare and take the exams for these certifications is available on the link at: https://support.google.com/google-ads/answer/9029201?hl=en. Students who complete the

requirements for a **Google Ads Search certification** and upload a copy of their certification on eLearning **before 10 pm on October 23, 2021** will get an extra 1 point.

In addition, after completing the Search certification, students can choose to do **two more certifications** from the other available certifications of **Google Ads display, Google Ads video and Shopping ads**. Earning each such certification will earn an additional 0.5 points. Copies of these certifications need to be uploaded on eLearning **before 10 pm on Nov 20, 2021** to earn the extra 0.5 points per completed certification.

After the deadlines specified above, the option of these extra grades will expire.

2. Students who complete the **Google Analytics individual qualification (IQ)** and upload a copy of their certification on eLearning **before 10 pm on Dec 7, 2021** will get an extra 0.5 points. After this deadline, the option of this extra grade will expire. More information about how to prepare and take the exam is available on the link: https://support.google.com/partners/answer/6089738?hl=en

Grading Policy:
The grades will be based on performance in quizzes, assignments, group presentations and reports. Late submissions will not be graded.

The grade distribution across different components will be as follows:

Major Quiz 1	20%
Major Quiz 2	20%
Major Quiz 3	20%
Group Project	15%
Group assignments	18%
Weekly short quizzes	5%
Peer evaluation	2%

Grading Criteria

Your course grade will depend on your overall score relative to your peers.

1) The students with scores in the 80th percentile and above will get an A grade.
2) The students with scores between the 80th and the 55th percentile will get an A- grade.
3) The students with scores between the 55th and the 40th percentile will get a B+ grade.
4) The students with scores between the 40th and the 25th percentile will get a B grade.
5) The students with scores below the 25th percentile will be decided by the instructor.

Note: The above is an indicative policy and it may be adjusted based on the instructor's discretion.

Other course policies

Make up exams	No make ups will be given except for documented medical reasons

Extra Credit	None other than the ones specified above
Late Work	Any late assignment will not be graded and awarded zero points
Special Assignments	No assignments will be given to make up for missed assignments etc.
Class Attendance	Students must make sure to keep up each week with the lectures and any submissions that may be due
Absence only for medical reasons	Only absences for medical reasons certified by a doctor will be considered in case of absences for quizzes etc. A prescription is not enough and the doctor must clearly state in their note the dates and reasons for your indisposition. Colds, flu, and headaches are not acceptable excuses.
Students with disabilities	It is the policy and practice at UT Dallas to make reasonable accommodations for students with properly documented disabilities. However, written notification from the Office of Student AccessAbility (OSA) is required. If you are eligible to receive an accommodation and would like to request it for this course, please discuss it with me during office hours and allow for one-week advance notice. Students with any questions about their eligibility for receiving accommodations should contact the OSA office first.

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 along with COVID-19 guidelines and resources:

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

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