

Course Syllabus
University of Texas at Dallas
Advanced Data Analytics and AI for Accountants & Auditors

Course Information

<i>Course Number/Section</i>	ACCT 6374.001
<i>Course Title</i>	Advanced Data Analytics and AI for Accountants & Auditors
<i>Term</i>	Fall 2025
<i>Days & Times</i>	Thursday 4:00pm to 6:45pm
<i>Room</i>	JSOM 1.110

Professor Contact Information

<i>Instructor</i>	Joseph Mauriello, PhD, CPA, CIA, CFE, CISA, CITP, CMA, CFSA, CRMA
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<i>Office Location</i>	JSOM 3.710
<i>Office Hours</i>	By appointment only

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

Pre-requisites: (ACCT 6301 and ACCT 6202) or ACCT 6305 or (ACCT 6330 and ACCT 6331) or BUAN 6359 or OPRE 6359 or (an undergraduate degree in Accounting and adequate foundation/academic performance in a corresponding area). The quantitative aspects of the course will require only elementary computational skills; however, a calculator and/or spreadsheet knowledge will be required. Familiarity with basic finance / accounting concepts (such as definitions of debits and credits, balance sheet, income statement, etc.) are required.

Course Description

This course provides an understanding of data analytics and artificial intelligence and how its theories and procedures can benefit accounting and auditing professionals. The central theme for the course will be the use and application of analytic techniques and artificial intelligence for decision making and the examination of "big data" involving accounting information. It will also cover the application of data analytics and artificial intelligence concepts and techniques to accounting, auditing, forensic, and risk management scenarios.

Student Learning Objectives/Outcomes

This course will provide the student with an understanding of data analytics as it pertains to auditing and accounting. The focus is on integrating key concepts from financial and managerial accounting, auditing, "big data," and data analytics techniques to provide students with a framework for using analytical techniques and theories and applying them to accounting.

Development of the following skills should be expected:

1. Become familiar with best practices surrounding data governance, structures, provisioning, and extraction.
2. Understand the basic concepts of data analytics and how it is utilized in auditing engagements and accounting environments.
3. Become familiar with the application of data visualization and analytical software and how they assist the business in understanding accounting data and making managerial decisions.
4. Understand how data is accumulated and presented in accounting systems.
5. Become familiar with the theory and methodology behind interpreting and analyzing financial statements.
6. Understand the purpose and role of internal and external auditors in relation to business data, including the relevant phases of audit engagements as well as the value of data analytics relative to assurance and consulting

Required Textbooks and Materials: *Data Analytics for Accounting by Richardson, Teeter, & Terrell, 2025 Edition, McGraw Hill ISBN 9781266496707*

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Assignments & Academic Calendar

The class schedule is subject to change at the discretion of the professor. Class will be composed of some lecture, discussion on case study and problems, and discussion on classroom topics.

Week	Date	Topic	Assignments / Readings
1	8/28/2025	Course Orientation Course introduction / Syllabus review	
2	9/4/2025	Introduction to Data Analytics in Accounting - Business Environment for Analytics and AI - Analytics Process - Big Data Overview / Accounting impact	Richardson Ch.1 Lindell Ch1-3
3	9/11/2025	Data Governance, Structures, and Sourcing - Governing data integrity / Regulatory Environment - Schemas, hierarchies, relational databases - Privacy and Security - Data Cleansing	Richardson Ch.2 Lindell Ch 9 Supplemental Materials
4	9/18/2025	No Class – Research for Project / Group Assignments	
5	9/25/2025	Financial Statement and Accounting Analytics - Analytics for external and internal reporting - Financial modeling and Ratio Analysis - Introduction to XBRL - VBA / Macros	Richardson Ch.8 Lindell Ch. 7-8
6	10/2/2025	Data Analysis Tools - Evolution of Data Analysis - Data Analysis Technologies - AI for analysis and insight	Lindell Ch 4-5 Supplemental Materials
7	10/9/2025	Case #1 Presentations	Due in E-Learning by 11:59pm 10/8/2025
8	10/16/2025	Exam #1	
9	10/23/2025	Managerial and Tax Analytics - Key Performance Indicators - Balanced Scorecard - Tax Data and Planning	Richardson Ch.7 Richardson Ch.9
10	10/30/2025	Data Visualization, KPI, & Dashboards - Slicing, dicing, pivot tables, charts - Objectives, components, interactivity - Visualization Tools: Tableau / Power BI / Excel	Richardson Ch.4 Lindell Ch 6 Supplemental Materials
11	11/6/2025	Introduction to Modeling and Evaluation - Statistical concepts for analytics - Data analytics approaches - Application of data analytics software - Introduction to R	Supplemental Materials Richardson Ch. 3
12	11/13/2025	Analytics Considerations for Auditors - Enhancing governance / risk management / monitoring - Fraud considerations - Data analytics in the audit function and business	Richardson Ch.5 Richardson Ch.6
13	11/20/2025	Exam #2	
14	11/27/2025	Thanksgiving Break – No Class	
15	12/4/2025	Final Project Presentations	Due in E-Learning by 11:59pm 12/3/2025

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Grading Policy

Your grade will consist of the following:

<u>Assignment</u>	<u>Percent</u>
Exams (2 – each 25%)	50%
Class Project	30%
Case Assignment	20%
Total Percentage	100%

Your final letter grade will be determined as follows:

A = 94-100	B = 84-86	C = 70-76
A- = 90-93	B- = 80-83	F = Below 70
B+ = 87-89	C+ = 77-79	

Course Policies

Exams

This course will include two exams. Each exam will cover specific lecture topics and course materials and neither exam will be comprehensive. More information will be provided regarding exam content and format closer to the respective test dates.

Make-up exams

There are no excused absences from the exams without a written excuse from the academic dean. If there is a serious scheduling conflict, it is your responsibility to let the instructor know well in advance. All students should plan to take exams as scheduled and if a conflict exists then the matter should be addressed well in advance of the exam date.

Please note that the following reasons are NOT considered acceptable reasons for a makeup exam: going on a vacation; sleeping late; being in jail; accidentally shooting your laptop; roommate issues; dating issues; attending a monster truck rally; having your clothing stolen from the dorm washing machine; a bad haircut; the first day of hunting season (or any day of hunting season); cat scratch fever; possession by the prince of darkness, interviewing for a reality show; and, any other reason that the professor feels is not a reflection of the spirit of the UTD policies towards missing class and assignments.

In the event of the zombie apocalypse, all course policies are suspended until further notice.

Working in teams

There will be several group assignments during the semester. It is imperative that you start these projects early and meet with your teams. Teams that start the process late tend to not perform as well on various projects. Team issues should be dealt with early in each project so adjustments can be made quickly. The instructor will not be held responsible for disputes that occur within teams and/or between team members. All students are expected to act in a manner consistent with the general expectations for a graduate student as well as in concert with University policies and guidance.

Presentations

It is expected that students will deliver presentations associated with group and/or individual assignments during the assigned class times.

Extra Credit

No extra credit will be available.

Late Work

No credit will be granted for late work.

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Special Project Assignments

A team project (team member assignments to be discussed in class) utilizing the concepts discussed throughout the course will represent 30% of the student's grade. The complete requirements for this project will be posted in eLearning and discussed in class.

Class Attendance

The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected regardless of modality.

Class attendance is highly recommended for you to understand all the topics that are covered in class. This class is taught with a lot of class discussion and the more that students put into the discussion and ideas for class the more everyone will get out of the class.

Class Participation

The University's stance on class participation is that regular class participation is expected regardless of course modality. Students who fail to participate in class regularly are inviting scholastic difficulty.

Classroom Citizenship

Respect your fellow students, your teaching assistants, and your instructor. Please be mindful of your online surroundings and mute your computer microphone when appropriate. While this course modality precludes meeting in person, it does not excuse anyone for acting in a manner inconsistent with 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](#).

Class Recordings

The instructor does not authorize recordings and/or distribution of materials, lectures, assignments, and or any intellectual property associated with the class. Recordings may not be published, reproduced, shared, 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](#).

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.

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.

Note: Please utilize your UTD email and the UTD email addresses of the Professor and the teaching assistants when communicating with them. The Professor and teaching assistants **will not** respond to messages from non-UTD email addresses.

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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.

COVID-19 Guidelines and Resources

UT Dallas will follow the public health and safety guidelines put forth by the Centers for Disease Control and Prevention (CDC), the Texas Department of State Health Services (DSHS), and local public health agencies that are in effect at that time during the Fall 2021 semester. Public health measures may be required for class participation (e.g., wearing of masks, social distancing) and students who refuse to comply may face disciplinary action for [Student Code of Conduct](#) violations. Students who are unable to comply with the university policies including wearing a face covering should consult the [Student Safety](#) webpage for further instructions.

Students who have tested positive for COVID-19 or may have been exposed should not attend class in person and should instead follow required disclosure notifications as posted on the university's website (see "[What should I do if I become sick?](#)" webpage).

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 Services

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

Please go to <http://go.utdallas.edu/academic-support-resources>.

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.

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