



THE UNIVERSITY OF TEXAS AT TYLER

SOULES COLLEGE OF BUSINESS

Spring 2025

Course number:	ACCT 5391
Course title:	Data Analytics for Accounting
Course format:	Face-to-face
Instructor:	Sai Harsha Katuri, Ph.D. Assistant Professor of Accounting
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Phone:	903-565-5893
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Class time:	6:00 pm - 8:45 pm on Wednesdays
Location:	COB 121
Office hours:	Monday and Wednesday, 1:00 p.m. to 4:00 p.m.; other times by appointment. Virtual office hours are available via Zoom.
Teaching method:	Lectures, class discussions, projects and analytical exercises
Prerequisites	ACCT 4391 and admission to the Master of Science in Professional Accountancy (MSPA) program or COSC 3333 and admission to the Master of Science in Finance program or consent of MSPA program director.

1 Course overview

In today's data-driven world, the ability to analyze and interpret vast amounts of information is paramount. This comprehensive course, "Data Analytics for Accounting," is designed to provide a broad understanding of the multifaceted field of data analytics. The course covers essential topics ranging from an overview of data analytics to practical applications in accounting. Beginning with a foundational understanding of data analytics, you will explore the intricacies of data acquisition, dimensional data modeling, and data

extraction, transformation, and loading (ETL). Then, you will delve into advanced techniques such as slicing and dicing, data visualization, and creating reports and dashboards.

As a part of the course, you must complete a project that will provide hands-on experience and facilitate a deeper understanding of the concepts taught. Emphasizing high-level concepts, this course offers a wide breadth of knowledge, equipping you with the essential skills and understanding needed to excel in the ever-evolving field of data analytics.

2 Student Learning Outcomes

The course aims to provide you with a comprehensive understanding of data analytics and hands-on experience using Alteryx. By the end of the course, you should be able to apply these concepts and techniques to real-world problems and make informed decisions based on data analysis. On successful completion of the course, you will be able to:

- Understand the fundamental concepts and importance of data analytics. Recognize the role of data analytics in various industries. Identify the key tools and platforms, with a focus on Alteryx.
- Learn the methods of data collection from various sources. Understand data quality and preparation using Alteryx. Recognize the ethical considerations in data acquisition.
- Understand the principles of dimensional data modeling. Create and manipulate dimensional models using Alteryx. Analyze the role of dimensional data in analytics.
- Learn the ETL process and its importance. Perform data extraction, transformation, and loading using Alteryx. Understand the challenges and solutions in ETL.
- Understand the concepts of slicing and dicing in data analysis. Apply slicing and dicing techniques using Alteryx. Analyze multidimensional data effectively.
- Learn the principles of data visualization. Create compelling visualizations using Alteryx. Interpret and communicate findings through visual means.
- Understand the importance of reporting in data analytics. Design and create interactive dashboards using Alteryx.

3 Course Materials

3.1 Canvas

- Lecture notes and slides will be posted on Canvas
- Supplementary videos and links to additional videos will be posted on Canvas
- Class announcements will be sent via Canvas, and you are responsible for reading these announcements (please make sure your Canvas settings are enabled for receiving emails)

3.2 Recommended Textbooks and Readings

1. Data and Analytics in Accounting: An Integrated Approach, 1st Edition - Ann C. Dzuranin, Guido Geerts, Margarita Lenk ISBN: 978-1-119-72315-8

3.3 Other Useful Resources

- Link to create a student account <https://offers.sheerid.com/alteryx/student/>
 - You need to verify before getting a license
- Required minimum system requirements to install Alteryx
 - <https://help.alteryx.com/20231/designer/system-requirements>
- Link to Alteryx certifications
 - <https://community.alteryx.com/t5/Certification/bd-p/product-certification>
- Videos and interactive lessons offered by Alteryx
 - <https://community.alteryx.com/t5/Maverryx-Academy/ct-p/alteryx-academy>
 - Check their learning paths and Weekly challenges
- More links will be provided during the classes

3.4 Software requirements

Throughout this course, we will utilize Alteryx Cloud, a leading data analytics platform, as a central tool for various assignments and projects.

4 Classroom policies

- Class starts promptly at the assigned time. If you have a problem that prevents you from arriving on time, please inform me as soon as possible. If this is a continuing issue, please select a seat near the entrance to minimize the disruptions to the classroom.
- Inform me in advance if you must leave the class before the scheduled ending time.
- Electronic devices (cell phones, pagers, iPods, etc.) must be deactivated during class. You may use your computer in class, but texting and surfing the internet are prohibited.
- Courtesy to the instructor and fellow students is expected. Open discussion is encouraged in the classroom, but derogatory remarks and profanity will not be allowed.
- Dishonesty will not be tolerated in this class. Violations of accepted standards of conduct will result in the imposition of the penalties the University allows.
- In an accounting class, missing just one class can cause you to fall behind! If you are absent, you must obtain materials and class notes. Lengthy instructions will not be repeated on a one-to-one basis.

4.1 Academic dishonesty statement

The faculty expects high responsibility and academic honesty from its students. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, a student must demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements acts or omissions related to applications for enrollment of the award of a degree, and/or the submission, as one's own work of material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

University regulations require the instructor to report all suspected cases of academic dishonesty to the Dean of Students for disciplinary action. In the event disciplinary measures are imposed on the student, it becomes part of the student's official school records. Also please note that the handbook obligates you to report all observed cases of academic dishonesty to the instructor.

5 Content outline and schedule

	Week starting	Topic	
1	12-Jan	Alteryx Boot Camp 1	
2	19-Jan	Alteryx Boot Camp 2	Homework 1 due
3	26-Jan	1. Data and Analytics in the Accounting Profession	Homework 2 due
4	2-Feb	2. Foundational Data Analysis Skills	Homework 3 due
5	9-Feb	3. Motivations and Objectives for Data Analysis	Homework 4 due
6	16-Feb	4. Planning Data and Analysis Strategies	Homework 5 due
7	23-Feb	5. Analysis: Data Preparation	Homework 6 due
8	2-Mar	6. Analysis: Information Modeling	Homework 7 due
9	9-Mar	Spring Break	
10	16-Mar	7. Analysis: Data Exploration	Homework 8 due
11	23-Mar	8. Interpreting Data Analysis Results	
12	30-Mar	9. Communicating Data Analysis Results	Project – Part A due
13	3-Apr	10. Recent Data and Analyses Developments in Accounting	Project – Part B due
14	13-Apr	Review week	Project – Part C due
15	20-Apr	Project Presentation (<i>Exact time and venue to be announced</i>)	Project – Part D due
16	27-Apr	Final Exam (<i>Administered as per UTT final exam schedule TBA</i>)	

6 Student evaluation

A student's grade for the class will be based on the following components:

1. Certifications	200	20%
2. Homework	$8*25 = 200$	20%
3. Project	200	20%
4. Class Quiz	$8*25 = 200$	20%
5. Final Exam	200	20%
	1000	100%

6.1 Grading scale

Weighted Total Score	Grade
Greater than 90%	A
80% to less than 90%	B
70% to less than 80%	C
60% to less than 70%	D
Less than 60%	F

6.2 Certification

In this course, we will explore Alteryx's powerful data analytics capabilities. Alteryx is a leading platform used by professionals in accounting, finance, and business intelligence. As part of your evaluation, you

must take the Alteryx Cloud certification exam, which is offered for free. The deadline for completing the certification will be announced in class.

6.3 Homework

To build practical skills and prepare students for their project work, the course includes eight individual homework assignments during the first half of the semester. These carefully structured assignments provide hands-on experience with data analytics concepts and tools, creating a foundation for the more complex project work that follows. These are individual assignments; each student must submit their original work. Students are welcome to discuss approaches, challenges, and solutions with their classmates but must submit their own work.

6.4 Project

The course culminates in a comprehensive project divided into four interconnected parts, with submissions scheduled across the final four weeks of the semester. This structured approach allows students to build their projects systematically, receive ongoing feedback, and refine their work progressively. Each week, students will submit one part of the project, enabling them to focus deeply on each component while maintaining steady progress. While students are encouraged to discuss ideas and approaches with their peers, they must submit their original work, demonstrating their individual mastery of the concepts and techniques covered throughout the course. The project experience concludes with student presentations, providing an opportunity to share their analytical insights, defend their methodological choices, and develop their professional communication skills. The grading rubric will be shared in the class.

6.5 Class quiz

The course includes regular assessment through brief in-class quizzes designed to reinforce learning and encourage consistent engagement with course material. In every class session, students will take a 10–15-minute quiz covering concepts from the previous class's chapter. These frequent, low-stakes assessments help students stay current with the material, identify areas that need clarification, and build a strong foundation in data analytics concepts progressively throughout the semester. There are ten quizzes in the course. The two lowest scores will be dropped.

6.6 Final exam

There will be a comprehensive final exam at the end of the course, designed to assess the student's comprehension and mastery of the theoretical concepts taught throughout the class. The questions will be similar to those in the class quizzes. More details will be shared in class.

- The exam will be administered at a pre-determined time. If you are unable to take an examination at the scheduled time for a valid reason, you must let me know at least one week before the examination period begins.
- If you miss the examination without informing me before the examination and/or without a legitimate reason, you will receive a score of zero for the examination.
- Dispute Policy: If you wish to dispute the grade assigned to a quiz or an exam, you must do so IN WRITING within two weeks after the grades have been posted. You must include a specific rationale for why your answer is correct.

6.7 Policies

- No make-up exams (except for documented medical or family emergencies) will be offered, nor will any changes be made to the Final Exam schedule, except as permitted by university rules.
- ***No extra credit assignments will be offered as it will be unfair to other students.***
- You are responsible for sharing your certification completion details with the instructor. ***Please forward the mail with the exam scores distribution on time. I will send an acknowledgment email.***

7. Usage of Artificial Intelligence (AI) Tools

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

For this course, AI is permitted only for specific assignments or situations, and appropriate acknowledgment is required. This course has specific assignments where artificial intelligence (AI) tools (such as ChatGPT or Copilot) are permitted and encouraged. When AI use is permissible, it will be clearly stated in the assignment directions, and all use of AI must be appropriately acknowledged and cited. Otherwise, the default is that AI is not allowed during any stage of an assignment.

8. Student Resources, University Policies, and Additional Information

Links will be shared on Canvas.