

ACCT 3301-115, Data Analytics 1

Spring 2023

Texas A&M University-Central Texas

COURSE DATES, MODALITY, AND LOCATION

This course is an online synchronous course from January 17, 2023 – May 12, 2023 that meets Mondays and Wednesdays 9:30-10:45am via WebEx meeting on Canvas. Supplemental materials will be made available online through the A&M-Central Texas Canvas Learning Management System [<https://tamuct.instructure.com/>].

INSTRUCTOR AND CONTACT INFORMATION

Instructor: Dr. Ankita Singhvi

Office: Founder's Hall room 323

Phone: 254.501.5933

Email: a.singhvi@tamuct.edu

Office Hours: Virtual office hours - Book via Calendly link <https://calendly.com/a-singhvi/meet-with-dr-singhvi>

Student-Instructor Interaction:

For communication, please email me at a.singhvi@tamuct.edu. Should you write me an email, please mention your **course** in the Subject line. I will try to get back to you within 24 hours during the week and within 36 hours during the weekend.

Please practice good communication skills. We will practice formal business communication emails so that you will develop good habits. Start out every email and/or discussion post with the name of the person you are addressing and close with your name. Utilize spelling and grammar check to help you write better.

Mode of instruction and course access:

This is an “Online” course and uses the A&M-Central Texas Canvas Learning Management System extensively: [<https://tamuct.instructure.com>] for audio lectures, supplemental materials (like readings and lecture PowerPoints), quizzes, exams, grade reporting, and assignment submissions. The instructions that follow in this syllabus will assist you with gaining access and technical support. Once you are in Canvas, *there is an icon on the left with a question mark surrounded by a circle (says Help when you hover over it) that will have additional Canvas resources if you are unfamiliar with the learning management system itself.*

Student-Instructor interaction:

It is easiest to reach me via email, as I check it very frequently to say the least. I will most likely respond to email in no more than 24 hours if not traveling, and usually within a couple of hours.

Emergency Warning System for Texas A&M University-Central Texas

SAFEZONE. SafeZone provides a public safety application that gives you the

ability to call for help with the push of a button. It also provides Texas A&M University-Central Texas the ability to communicate emergency information quickly via push notifications, email, and text messages. All students automatically receive email and text messages via their myCT accounts.

Downloading SafeZone allows access to push notifications and enables you to connect directly for help through the app.

You can download SafeZone from the app store and use your myCT credentials to log in. If you would like more information, you can visit the [SafeZone](#) website [www.safezoneapp.com].

To register SafeZone on your phone, please follow these 3 easy steps:

1. Download the SafeZone App from your phone store using the link below:
 - o [iPhone/iPad](https://apps.apple.com/app/safezone/id533054756): [https://apps.apple.com/app/safezone/id533054756]
 - o [Android Phone / Tablet](https://play.google.com/store/apps/details?id=com.criticalarc.safezoneapp)
[https://play.google.com/store/apps/details?id=com.criticalarc.safezoneapp]
2. Launch the app and enter your myCT email address (e.g. {name}@tamuct.edu)
3. Complete your profile and accept the terms of service

For updates on COVID information, please monitor the University [website](#) [[https://www.tamuct.edu/covid19/](http://www.tamuct.edu/covid19/)]

COURSE INFORMATION

Course Overview and Description:

Course Overview:

The goal of this course is to introduce and develop the skills required for an analytics mindset in accounting. Students will be introduced to and learn to apply the concepts of data scrubbing, data preparation, data quality, descriptive data analysis, data manipulation, and data visualization using various data analytic tools to prepare reports and solve problems using statistical data analysis.

Course Description:

The combination of computerization and automation of many accounting tasks as well as the explosion of available data is changing the accounting profession. To address this, accountants are increasingly required to have an analytics mindset to perform their jobs. Building upon the fundamentals of accounting learned in prior courses, *Introduction to Data Analytics for Accounting* explores accounting concepts through the application of data analytics. We recognize students need to not only develop the skills to ask the right questions, but to learn how to use tools they may encounter in the workplace such as Excel® to examine and analyze data, and then effectively interpret results to make business decisions. This analytics mindset is crucial early in the study of accounting to meet the demands of today's accounting jobs.

Introduction to Data Analytics for Accounting provides a framework for developing a Data Analytics mindset we refer to as the **AMPS model**:

- Ask the Question (Chapter 1).
- Master the Data (Chapters 2–4).
- Perform the Analysis (Chapters 5–9).

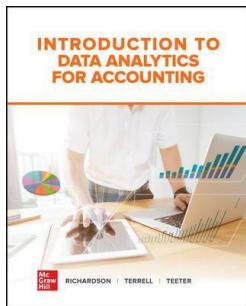
- Share the Story (Chapter 10).

This model is used throughout the text in conjunction with the various types of analysis accountants need to perform. The labs follow this framework to reinforce the analytical process. Chapter 11 acts as a capstone, providing two projects applying the complete AMPS model. The first project guides students through analyzing Lending Club loans, while the second offers the framework for students to address their own accounting question.

Course Objective:

- Explain how data analytics affects business and accounting, including the skills an analytic-minded Accountant needs.
- Explain how data are organized in accounting information systems, stored in relational database as well as extracted, transformed and loaded.
- Utilize various data analytics approaches, including data reduction, regression, classification, and clustering.
- Utilize data visualization techniques to communicate results.
- Compare how data analytics is utilized in Management Accounting, Internal Audit, External Audit and Continuous Auditing.
- Apply data analytics in a Management Accounting, Internal Audit, External Audit or Continuous Auditing scenario.
- Evaluate data quality using KPIs.
- Create visualizations of financial statement data.
- Demonstrate the application of data analytics tools used in accounting for decision making.
- Introduce QuickBooks Online.

Textbook(s):



Introduction to Data Analytics for Accounting, McGraw-Hill, 2021.

ISBN: 978-1-26-406831-9

COURSE REQUIREMENTS

This course is made up of book chapters that are comprised of assignments, assessments, and labs to assist you in achieving the course and learning objectives/outcomes. Each week you will work on various combinations of assignments, activities, discussions, readings, research, etc., which will be made available to you on your canvas course.

Technology Requirements: Excel, Tableau and QuickBooks.

Tableau offers free one-year Tableau licenses to students and instructors at accredited academic

institutions through their Tableau for Students program. The license will work on PCs and Macs. Here is the link for requesting a license: <https://www.tableau.com/academic/students>. Remember to make sure to use their .edu email address. Tableau will use that account to verify that they are a student.

Chapter Presentations:

Every week there will be 2-4 discussion leaders for the chapter we cover in class. These leaders will be assigned a chapter to discuss and present as a group via video. These videos typically last 20 minutes (can be longer if needed) covering highlights of the chapter. All presentations must demonstrate one of the chapter exercises that is not already assigned in Connect. This will help us discuss the highlights of the chapter. If you are not presenting, you will watch the video and post your comments and thoughts surrounding that topic/chapter/exercise by the end of the week. Videos for a chapter of discussion must be posted no later than Tuesday by 9am CST of the week of assigned chapters. All discussion on it ends by Sunday of the same week. Discussion Leaders will be posted on Canvas.

QuickBooks Learning:

You have the opportunity to learn QuickBooks Online, a popular accounting software via Intuit. There is LinkedIn Learning that currently offers a one month trial that may mitigate the cost. The cost of LinkedIn Learning is \$39.99/month , 1 month free trial and your access needs will likely be for 1-2 months. The estimated cost for this is \$40. Please note that these numbers are estimates and controlled by LinkedIn and are subject to change at their discretion.

More information can be found here:

https://www.linkedin.com/learning/subscription/products?courseSlug=learning-excel-2019&destRedirectURL=https%3A%2Fwww%2Elinkedin%2Ecom%2Flearning%2Flearning-excel-2019&trk=learning-course_nav-header-join&upsellTrk=lil_upsell_nav_subscription&session_redirect=https%3A%2Fwww.linkedin.com%2Flearning%2Flearning-excel-2019%3Ftrk%3Dlearning-serp_learning_search-card&upsellOrderOrigin=homepage-learning_learning-search-bar_search-submit&upsellTrackingId=Z0ISUFdtQm%2B0OR7Mj15EXw%3D%3D&contextUrn=urn%3Ali%3AlyndaCourse%3A746264&lipi=urn%3Ali%3Apage%3Ad_learning_course_quest_jsbeacon%3BGMKDp8a6Sb6XD1Tou28nlQ

<https://www.linkedin.com/learning/quickbooks-online-essential-training-2021>

Discussions:

There will be weekly subject matter discussions that you are expected to post on each week. Each post must be detailed, complete and include all details answering all questions posted. All discussion posts will be graded.

Connect Assignments:

There will be lab assignments throughout each chapter that will be due as per Connect. The number of lab assignments vary by chapter. You will be able to print them, work them out and then submit them online. The correct answers will be available thru Canvas after the due date and time.

There must be NO Submissions via email. You should read the instructions thoroughly before trying to upload.

Capstone Exercise:

There will be one Capstone exercise that will be accessed thru Canvas at the end of the semester. This capstone exercise is intended to let the students go through the entire data analysis process, start to finish. The idea is that the students operationalize the AMPS model by asking the question, finding and mastering the data, performing the analysis, and sharing the story. The Capstone will not be timed but may be submitted only ONE time. After the due date, you will be able to access your grade and see suggested solutions for each question. The presentation of your capstone project will be graded for a maximum of 100 points. The written portion will be 200 points. More details on this will be discussed in class.

Service-learning Assignment

This course is designated as a service-learning course. Service learning means “to relate theory to practice by participating in an organized service activity that meets identified community needs and then by reflecting upon the service activity in such ways as to meet instructional objectives, and gain a broader appreciation for the discipline and an enhanced sense of civic responsibility.” Students are expected to observe data related issues related to the concepts discussed in class. There is an expectation of 15 hours of community engagement by each student. Students will complete guided reflection activities throughout the course. More details on this will be provided later.

Grading Criteria Rubric and Conversion:

Students earn their course grades by completing scheduled assignments. There are no extra credit assignments for this course. To satisfactorily pass this course, students must complete each of the graded items listed below. Failure to submit appropriate documents for scoring in each category will result in a failing grade.

Course Element	Points	Percentage
Chapter Presentations	150	16.67
QuickBooks Learning	100	11.11
Discussions	100	11.11
Connect Assignments	150	16.67
Capstone Exercise (200) and Presentation (100)	300	33.33
Service-Learning Assignment	100	11.11
Total	900	

Grade Percentage	Letter Grade
90.0 – 100 %	A
80.0 – 89.9 %	B

70.0 – 79.9 %	C
60.0 – 69.9 %	D
00.0 – 59.9 %	F

Posting of Grades:

Grades will be posted on the Canvas Grade book where students can monitor their status. Please reach out to the instructor if you wish to discuss your grade as canvas does not accurately reflect weighted grades unless all grade components are scored.

Grading Policies:

This course involves lab assignments that have 2 aspects – auto grading and manual grading. You will see the auto graded portion reflect immediately on canvas. However, manual parts are not graded by connect. I grade these by hand and given the number of submissions each week, it may take up to a week to get these back to you. The turnaround time is an estimate of expectations for grades to be reflected in Canvas.

COURSE OUTLINE AND CALENDAR

Complete Course Calendar:

The following schedule is tentative. If changes are necessary, they will be announced on Canvas. It is your responsibility to learn of any changes announced by your instructor.

Date	Chapter	Assignments
Week – 1		Introduction to course Complete Introduction Discussion post
Week – 2	Chapter 1	Using Data Analytics to Ask and Answer Accounting Questions
Week – 3	Chapter 2	Mastering the Data: An Introduction to Accounting Data
Week – 4	Chapter 3	Accounting Data: Data Types and How They are Used
Week – 5	Chapter 4	Master the Data: Preparing Data for Analysis
Week – 6	Chapter 5	Perform the Analysis: Types of Data Analytics

Week – 7	Chapter 5	Perform the Analysis: Types of Data Analytics
Week – 8	Chapter 6	Perform the Analysis: Descriptive Analytics
Week – 9	Chapter 7	Perform the Analytics: Diagnostic Analytics
Week – 10	Chapter 8	Perform the Analytics: Predictive Analytics
Week – 11	Chapter 9	Perform the Analytics: Prescriptive Analytics
Week – 12	Chapter 9	Perform the Analytics: Prescriptive Analytics
Week – 13	Chapter 10	Share the Story
Week – 14	Chapter 11	Using the AMPS Model to put it all Together: Capstone Projects
Week – 15	Chapter 11	Using the AMPS Model to put it all Together: Capstone Projects
Week – 16	Capstone wrap up	Presentations

Important University Dates:

<https://www.tamuct.edu/registrar/academic-calendar.html>

TECHNOLOGY REQUIREMENTS AND SUPPORT

Technology Requirements

This course will use the A&M-Central Texas Instructure Canvas learning management system. **We strongly recommend the latest versions of Chrome or Firefox browsers. Canvas no longer supports any version of Internet Explorer.**

Logon to A&M-Central Texas Canvas [<https://tamuct.instructure.com/>] or access Canvas through the TAMUCT Online link in myCT [<https://tamuct.onecampus.com/>]. You will log in through our Microsoft portal.

Username: Your MyCT email address. Password: Your MyCT password

Canvas Support

Use the Canvas Help link, located at the bottom of the left-hand menu, for issues with Canvas. You can select “Chat with Canvas Support,” submit a support request through “Report a Problem,” or call the Canvas support line: 1-844-757-0953.

For issues related to course content and requirements, contact your instructor.

Other Technology Support

For log-in problems, students should contact Help Desk Central, 24 hours a day, 7 days a week

Email: helpdesk@tamu.edu

Phone: (254) 519-5466

[Web Chat](http://hdc.tamu.edu): [http://hdc.tamu.edu]

Please let the support technician know you are an A&M-Central Texas student.

UNIVERSITY RESOURCES, PROCEDURES, AND GUIDELINES

Academic Accommodations

At Texas A&M University-Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to a barrier-free education. The Warrior Center for Student Success, Equity and Inclusion is responsible for ensuring that students with a disability receive equal access to the university’s programs, services and activities. If you believe you have a disability requiring reasonable accommodations, please contact the Office of Access and Inclusion, WH-212; or call (254) 501-5836. Any information you provide is private and confidential and will be treated as such.

For more information, please visit our [Access & Inclusion](#) Canvas page (log-in required)
[<https://tamuct.instructure.com/courses/717>]

COBA Learner Access and Success: This web site has been specially designed to provide “one stop shopping” for the University and College resources that College of Business Administration students are likely to need throughout the semester. This includes setting up an appointment with an advisor, tutoring, career and professional development, among other services and many helpful videos. **Check it out and bookmark it, it will be very useful:** [COBA Learner Access and Success](https://www.tamuct.edu/coba/coba-learners.html) (<https://www.tamuct.edu/coba/coba-learners.html>)

Academic Integrity

Texas A&M University-Central Texas values the integrity of the academic enterprise and strives for the highest standards of academic conduct. A&M-Central Texas expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to preserve the honor and integrity of the creative community. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. All academic misconduct concerns will be referred to the Office of Student Conduct. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

For more [information regarding the student conduct process](#),
[<https://www.tamuct.edu/student-affairs/student-conduct.html>].

If you know of potential honor violations by other students, you may [submit a referral](#),
[https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0].

Drop Policy

If you discover that you need to drop this class, you must complete the [Drop Request](#) Dynamic Form through Warrior Web.

[<https://federation.ngwebsolutions.com/sp/startSSO.ping?PartnerIdpId=https://eis-prod.ec.tamuct.edu:443/samlsso&SpSessionAuthnAdapterId=tamuctDF&TargetResource=https%3a%2f%2fdynamicforms.ngwebsolutions.com%2fSubmit%2fStart%2f53b8369e-0502-4f36-be43-f02a4202f612>].

Faculty cannot drop students; this is always the responsibility of the student. The Registrar's Office will provide a deadline on the Academic Calendar for which the form must be completed. Once you submit the completed form to the Registrar's Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Registrar's Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

Important information for Pregnant and/or Parenting Students

Texas A&M University-Central Texas supports students who are pregnant and/or parenting. In accordance with requirements of Title IX and related guidance from US Department of Education's Office of Civil Rights, the Dean of Student Affairs' Office can assist students who are pregnant and/or parenting in seeking accommodations related to pregnancy and/or parenting. Students should seek out assistance as early in the pregnancy as possible. For more information, please visit [Student Affairs](#) [<https://www.tamuct.edu/student-affairs/pregnant-and-parenting-students.html>]. Students may also contact the institution's Title IX Coordinator. If you would like to read more about these [requirements and guidelines](#) online, please visit the website [<http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf>].

Title IX of the Education Amendments Act of 1972 prohibits discrimination on the basis of sex and gender— including pregnancy, parenting, and all related conditions. A&M-Central Texas is able to provide flexible and individualized reasonable accommodation to pregnant and parenting students. All pregnant and parenting students should contact the Associate Dean in the Division of Student Affairs at (254) 501-5909 to seek out assistance. Students may also contact the University's Title IX Coordinator.

Tutoring

Tutoring is available to all A&M-Central Texas students, both virtually and in-person. Student success coaching is available online upon request.

If you have a question, are interested in becoming a tutor, or in need of success coaching contact the Warrior Center for Student Success, Equity and Inclusion at (254) 501-5836, visit the Warrior Center at 212 Warrior Hall, or by emailing WarriorCenter@tamuct.edu.

To schedule tutoring sessions and view tutor availability, please visit [Tutor Matching Services](#) [<https://tutormatchingservice.com/TAMUCT>] or visit the Tutoring Center in 111 Warrior Hall.

Chat live with a remote tutor 24/7 for almost any subject from on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log in and receive online tutoring support at no additional cost. This tool provides tutoring in over 40 subject areas except writing support. Access Tutor.com through Canvas.

University Library & Archives

The University Library & Archives provides many services in support of research across campus and at a distance. We offer over 350 electronic databases containing approximately 631,525 eBooks and 75,149 journals, in addition to the 97,443 items in our print collection, which can be mailed to

students who live more than 50 miles from campus. Research guides for each subject taught at A&M-Central Texas are available through our website to help students navigate these resources. On campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.

Research assistance from a librarian is also available 24 hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place virtually through WebEx, Microsoft Teams or in-person at the library. [Schedule an appointment here](#)

[<https://tamuct.libcal.com/appointments>]. Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.

Our 27,000-square-foot facility on the A&M-Central Texas main campus includes student lounges, private study rooms, group work spaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our [Library website](#) [<https://tamuct.libguides.com/index>]

University Writing Center

University Writing Center: Located in Warrior Hall 416, the University Writing Center (UWC) at Texas A&M University–Central Texas (A&M–Central Texas) is a free service open to all A&M–Central Texas students. The hours of operation are from 10:00 a.m.-5:00 p.m. Monday thru Thursday in Warrior Hall 416 (with online tutoring available every hour as well) with satellite hours available online only Monday thru Thursday from 6:00-9:00 p.m. and Saturday 12:00-3:00 p.m.

Tutors are prepared to help writers of all levels and abilities at any stage of the writing process. While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. By providing a practice audience for students' ideas and writing, our tutors highlight the ways in which they read and interpret students' texts, offering guidance and support throughout the various stages of the writing process. In addition, students may work independently in the UWC by checking out a laptop that runs the Microsoft Office suite and connects to WIFI, or by consulting our resources on writing, including all of the relevant style guides. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the UWC is here to help!

Students may arrange a one-to-one session with a trained and experienced writing tutor by making an appointment via [WCOOnline](#) [<https://tamuct.mywconline.com/>]. In addition, you can email Dr. Bruce Bowles Jr. at bruce.bowles@tamuct.edu if you have any questions about the UWC, need any assistance with scheduling, or would like to schedule a recurring appointment with your favorite tutor.

A Note about Sexual Violence at A&M-Central Texas

Sexual violence is a serious safety, social justice, and public health issue. The university offers support for anyone struggling with these issues. University faculty are mandated reporters, so if someone discloses that they were sexually assaulted (or a victim of Domestic/Dating Violence or Stalking) while a student at TAMUCT, faculty members are required to inform the Title IX Office. If you want to discuss any of these issues confidentially, you can do so through Student

Wellness and Counseling (254-501-5955) located on the second floor of Warrior Hall (207L).

Sexual violence can occur on our campus because predators often feel emboldened, and victims often feel silenced or shamed. It is incumbent on ALL of us to find ways to actively create environments that tell predators we don't agree with their behaviors and tell survivors we will support them. Your actions matter. Don't be a bystander; be an agent of change. For additional information on campus policy and resources visit the [Title IX webpage](#) [<https://www.tamuct.edu/compliance/titleix.html>].

Behavioral Intervention

Texas A&M University-Central Texas cares about the safety, health, and well-being of its students, faculty, staff, and community. If you are aware of individuals for whom you have a concern, please make a referral to the Behavioral Intervention Team. Referring your concern shows you care. You can complete the [referral](#) online [https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=2].

Anonymous referrals are accepted. Please see the [Behavioral Intervention Team](#) website for more information [<https://www.tamuct.edu/bit>]. If a person's behavior poses an imminent threat to you or another, contact 911 or A&M-Central Texas University Police at 254-501-5800.