



TEXAS A&M UNIVERSITY
SAN ANTONIO

ACCT 5331 – 600: Accounting Analytics

Spring 2024; CRN: 24421

Department of Accounting & Finance, College of Business

Course Syllabus

Class Modality: Online – Synchronous
Class Meeting Time and Location: R 7:00 PM – 8:15 PM
Class Duration: 01/16 – 05/07

Instructor: Professor Xingyuan (Miko) Fei, Ph.D.

Office: BLH 241-J

Tel: 210-784-2378

E-Mail: xfei@tamusa.edu

Student emails will receive a reply within two business days.

Office Hours: M 11:00 AM – 2:00 PM (in-person)
R 1:00 PM – 6:00 PM (online) & by appointment

Prerequisites:
ACCT 5307.

Catalog Course Description:

This course introduces data analytics for accounting with a focus on analytical techniques for decision making and the examination of big data involving accounting information. It applies data analytics techniques to accounting areas such as financial accounting, managerial accounting, auditing, and tax. Hands-on experiences will develop skills useful in data analytics for accounting professionals and provide data-driven insights and recommendations.

Course Objectives:

In this course, students engage in discussion on current issues in the topics of accounting as it relates to financial, managerial, audit and tax accounting. With more information being available each day, accountants need to recognize this and use data obtained effectively to help businesses make the best decisions. Hands-on experiences will develop skills useful in data analytics for accounting professionals and provide data-driven insights and recommendations. **A critical thinking attitude is encouraged throughout the course.**

Student Learning Outcomes:

Upon successful completion of this course, students will be able to

- Explain what data analytics is and effectively use and interpret analytic models to make better business decisions.

- Describe how to diagnose and fix data cleaning errors related to data duplication, data filtering, and data entry errors.
- Use Microsoft Excel and Python to manipulate, summarize, and analyze data in practical business situations.
- Use Tableau for data visualizations.
- Apply basic business analytics principles in different accounting areas.
- Answer CPA exam questions covered in related topics.

Required Materials:

- **Textbook:** *no required textbook; course materials will be provided in Blackboard.*
- **Blackboard:** <http://tamusa.blackboard.com>
 - The most up to date syllabus and other materials, including lecture slides, supplementary readings, quizzes, exams, projects, and course announcements, will be posted to Blackboard.
 - **Discussion boards** are available via Blackboard for student communication and discussions as you see fit for class interaction in the online environment.
- **Course software:**
 - **Microsoft Excel**
 - **Tableau**
 - **Python**

Artificial Intelligence (AI) Policy:

This course assumes that all work submitted by students will be generated by the students themselves, working individually or in groups. Students should not have another person/entity do the writing of any portion of an assignment for them, which includes using artificial intelligence (AI) tools like ChatGPT.

Course Communications:

I will communicate any clarifications, changes and/or additions using announcements via Blackboard. You will be responsible for any information I communicate to you via Blackboard (email). If you have any questions, please send me an email (xfei@tamusa.edu) using your university student email.

Course Requirements every student must fulfill in order to succeed in course:

1. Students should remember that **hybrid courses** assume **greater** responsibility and independent learning skills by the student for their own learning outcomes.
2. There are online units of learning posted to Blackboard. Students **MUST** complete the assigned course requirements on Blackboard and will be held accountable for all materials posted on Blackboard.
3. Ensure to set up expectation of time for this course. Change based on your course needs. You are expected to spend **3-6 hours per week** for the course. Based on the background, some students may need more time. Time spent may be longer when projects/exams are due.
4. Do not delay. Plan on being successful by beginning your study **NOW**. The instructor will not be revising the grading systems based on anyone's initial poor performance.

5. Students should check the Course Calendar, Announcements, and Messages (e-mail) systems in Blackboard on a regular basis.
6. Students should keep current with all projects, quizzes, and examinations.
7. Students should ask questions and communicate with the instructor either in class, online, off-line or during office hours.

Grading Policy:

The final course grade will be based on your performance on exams, required assignments and projects using the following weights:

Critical Thinking Projects & Assignments	60%
Final Project & Presentation	20%
Class Participation and Discussion	10%
<u>Midterm Exam</u>	<u>10%</u>
Total	100%

The final letter grade will be assigned as follows: Above 90% ⇒ A; 80 – 89.99% ⇒ B; 70 – 79.99% ⇒ C; 60 – 69.99% ⇒ D; below 60% ⇒ F. There will be no grading on a curve.

You can find the grade policy in the graduate catalog in general starting on page 77 and the MPA program on page 90:

www.tamusa.edu/academics/Office-Of-The-Provost/Graduate-Catalog-2019-2020.pdf

Critical Thinking Projects & Assignments:

The best way to learn is to have hands-on experiences. Learning data analytics for accounting takes a great deal of practice. Accordingly, 3 critical thinking projects and 5 Python assignments will be assigned for topics covered in the class. Students can work on these assignments on their own or in a group. However, copy-and-paste of your group member’s work is NOT allowed in any case. Individual assignments and due dates will be posted to Blackboard. For each project and assignment, students are required to self-reflect on lessons learned.

Final Project and Presentation:

The final project is a research paper analyzing a current and relevant topic in the area of the student’s future accounting discipline using data analytics techniques. Students will present their portfolio project at the end of the semester before submitting the write-up. Details will be provided during the semester. The instructor will provide feedback to students regarding the research questions, data used for analysis, etc.

Class Participation and Discussion:

A vital part of every student's education is regular attendance of class meetings (for face-to-face/hybrid classes/online synchronous classes). Any absences tend to lower the quality of a student's work, and frequent or persistent absences may result in a failing grade. Class participation and discussion is highly encouraged as it makes the class more engaging and enhances the experiential learning experience. We will conduct in-class debriefings to discuss lessons learned, opportunities for improvement, and how the experiential learning will help you in the future.

Midterm Exam:

There will be a *take-home* mid-term exam during the semester. The exam materials will come from lecture materials and class discussions. Questions will emphasize understanding and applications of concepts and topics covered in class. **Students should work on the exam on their own. No team work will be allowed for exams.**

Make up and Late Exam/Project policy:

As a general rule, make-ups or late submissions will NOT be offered or accepted for any missed exam/project. Late submissions or make-ups may be accepted/administered only in extra-ordinary circumstances such as an excused official university activity, a severe illness, or a dire emergency. However, you must provide comprehensive documentation either before or within a few days of the missed exam/project.

Class conduct and civility code:

Everyone in class is expected to follow all rules in the student handbook, as well as common courtesy during classroom lectures and discussions in class and online, including the following:

1. Attendance may be made at the beginning or the end of the class.
2. Students must retain copies of all assignments and graded work for verification purposes and provide it to the instructor, if necessary. Keep your own copies of all computer files and e-mails till the final grade is received.
3. Talking while the instructor is lecturing is extremely disruptive and discourteous to the instructor and other students.
4. Using computers or phones (except for a valid urgent need) during class for a purpose not related to class is disruptive. All cell phones and gadgets should be turned OFF and headphones removed.
5. For any questions about the exams and projects, a student should contact the instructor, well in advance of the day they are due, so the instructor may have enough time to provide feedback.
6. All communications will be via e-mail communications to the Texas A&M University e-mail account, and students are expected to use their school provided email account. The instructor will reply to a student e-mail messages within 2 business days (Monday-Friday).

Anyone violating these policies may be subject to disciplinary actions.

Drop Policy

You may drop the course with an automatic grade of W on or before the date listed in the academic calendar at www.tamusa.edu. The last date to drop a course, or withdraw from the University is also indicated in the academic calendar on the university website (www.tamusa.edu). If you wish to drop the class, you must submit the necessary paperwork to the proper authority. Students dropping a course are subject to all conditions listed in the university catalog.

Academic Accommodations for Persons with Disabilities:

The Americans with Disabilities Act Amendments Act (ADAAA) of 2008 and the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights protection for persons with disabilities. Title II of the ADAAA and Section 504 of the Rehabilitation Act require that students with disabilities be guaranteed equal access to the learning environment through the provision of reasonable and appropriate accommodation of their disability. If you have a diagnosed disability that may

require accommodation, please contact Disability Support Services (DSS) for the coordination of services. The phone number for DSS is (210) 784-1335 and email is dsupport@tamusa.edu.

Academic Learning Center:

The Academic Learning Center provides free course-based tutoring to all currently enrolled students at Texas A&M University-San Antonio. Students wishing to work with a tutor can make appointments through the Brainfuse online tutoring platform. Brainfuse can be accessed in the Tools section of Blackboard. You can contact the Academic Learning Center by emailing tutoring@tamusa.edu, calling (210) 784-1307, or visiting the Central Academic Building, room 202.

Counseling/Mental Health Resources:

As a college student, there may be times when personal stressors interfere with your academic performance and/or negatively impact your daily functioning. If you are experiencing emotional difficulties or mental health concerns, support is available to you through the Student Counseling Center (SCC). To schedule an appointment call 210-784-1331 or visit Modular C, Room 166 (Rear entrance).

All mental health services provided by the SCC are free and confidential (as the law allows). The Student Counseling Center provides brief individual and group therapy, crisis intervention, consultation, case management, and prevention services.

Crisis support is available 24/7 by calling the SCC at 210-784-1331 (after-hours select option '2'). For more information and self-help resources, please visit www.tamusa.edu/studentcounseling

Emergency Preparedness: JagE Alert is Texas A&M University-San Antonio's mass notification. In the event of an emergency, such as inclement weather, students, staff and faculty, who are registered, will have the option to receive a text message, email with instructions and updates. To register or update your information visit: <https://tamusa.bbcportal.com/>.

More information about Emergency Preparedness and the Emergency Response Guide can be found here:

<https://www.tamusa.edu/uploadfile/folders/sdbowen23/pdf/pdf-635073426137928167-10.100.20.116.pdf>

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University Email Policy and Course Communications

All correspondence between professors and students must occur via University email accounts. You must have Jaguar email account ready and working. If it is not working, contact the help desk at 210-784-4357.

Financial Aid and Verification of Attendance:

According to the following federal regulation, 34 CFR 668.21: U.S. Department of Education (DoE) Title IV regulation, a student can only receive Title IV funds based on Title IV eligibility criteria which include class attendance. If Title IV funds are disbursed to ineligible students (including students who fail to begin attendance), the institution must return these funds to the U.S. DoE within 30 days of becoming aware that the student will not or has not begun attendance. Faculty will provide the Office of

Financial Aid with an electronic notification if a student has not attended the first week of class. Any student receiving federal financial aid who does not attend the first week of class will have their aid terminated and returned to the DoE. Please note that any student who stops attending at any time during the semester may also need to return a portion of their federal aid.

Meeting Basic Needs:

If you face challenges securing food, housing or other basic needs, you are not alone, and A&M-San Antonio can help during this time of crisis. We invite you to learn about the many resources available to support you by visiting the [Dean of Student's website](#) or by reaching out via dos@tamusa.edu. Additionally, it is not unusual for students to encounter temporary illness or injuries that may interfere with your academic success. Students may request temporary illness/disability assistance by reaching out to the [Dean of Student's Office](#) (210) 784-1354. If you are comfortable doing so, please notify the professor of any issues so that they may provide additional resources.

Military Affairs:

Veterans and active-duty military personnel are welcomed and encouraged to communicate, in advance if possible, and in special circumstances (e.g., upcoming deployment, drill requirements, disability accommodations). You are also encouraged to visit the Patriots' Casa in-person room 202, or to contact the Office of Military Affairs with any questions at military.va@tamusa.edu, or (210)784-1397.

Religious Observances:

Texas A&M University-San Antonio recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes for regular session classes.

Respect for Diversity:

We understand that our students represent diverse backgrounds and perspectives. When we are equity-minded, we are aware of differences and inequalities and are willing to discuss them so we can act to resolve them. The University is committed to building cultural competencies, or the attitudes, skills, and knowledge that enable individuals and organizations to acknowledge cultural differences and incorporate these differences in working with people from diverse cultures. Respecting and accepting people different than you is vital to your success in the class, on campus, and as a future professional in the global community. While working together to build this community we ask all members to:

- Share their unique experiences, values, and beliefs.
- Be open to the views of others.
- Honor the uniqueness of their colleagues.
- Value each other's opinions and communicate respectfully.
- Keep confidential discussions that the community has of a personal (or professional) nature.
- Use this opportunity together to discuss ways in which we can create an inclusive environment in this course and across the A&M-San Antonio community.

The Six-Drop Rule:

Students are subject to the requirements of Senate Bill (SB) 1231 passed by the Texas Legislature in 2007. SB 1231 limits students to a maximum of six (6) non-punitive course drops (i.e., courses a student chooses to drop) during their undergraduate careers. A non-punitive drop does not affect the student's GPA.

However, course drops that exceed the maximum allowed by SB 1231 will be treated as “F” grades and will impact the student’s GPA.

Statement of Harassment and Discrimination:

Texas A&M University-San Antonio is committed to the fundamental principles of academic freedom, equality of opportunity, and human dignity. To fulfill its multiple missions as an institution of higher learning, A&M-San Antonio encourages a climate that values and nurtures collegiality, diversity, pluralism, and the uniqueness of the individual within our state, nation, and world. All decisions and actions involving students and employees should be based on applicable law and individual merit. Texas A&M University-San Antonio, in accordance with applicable federal and state law, prohibits discrimination, including harassment, on the basis of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation, gender identity, or gender expression. Individuals who believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the appropriate offices within their respective units.

Texas A&M University-San Antonio faculty are committed to helping create a safe learning environment for all students and for the university as a whole. If you have experienced any form of sex- or gender-based discrimination or harassment, including sexual assault, sexual harassment, domestic or dating violence, or stalking, know that help and support are available. A&M-San Antonio has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. The university strongly encourages all students to report any such incidents to the university. Please be aware that all A&M-San Antonio employees (other than those designated as confidential resources such as counselors and other healthcare providers) are required to report information about such discrimination and harassment to the university. This means that if you tell a faculty member about a situation of sexual harassment, sexual violence, or other related misconduct, the faculty member must share that information with the university’s Title IX Coordinator. If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact the Student Counseling Center at (210) 784-1331, Modular C.

Students’ Rights and Responsibilities:

The purpose of the following statement is to enumerate the essential provisions for the student freedom and responsibility to learn at Texas A&M University-San Antonio. All students are required to follow all policies and regulations as set forth by The Texas A&M University System. This includes the [A&M-San Antonio Student Code of Conduct](#).

Students’ Rights

1. A student shall have the right to participate in a free exchange of ideas, and there shall be no university rule or procedure that in any way abridges the rights of freedom of speech, expression, petition and peaceful assembly as set forth in the U.S. Constitution.
2. Each student shall have the right to participate in all areas and activities of the university, free from any form of discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, genetic information, veteran status, gender identity, or gender expression in accordance with applicable federal and state laws.
3. A student has the right to personal privacy except as otherwise provided by law, and this will be observed by students and University authorities alike.
4. Each student subject to disciplinary action arising from violations of university student rules shall be assured a fundamentally fair process.

Students' Responsibilities

1. A student has the responsibility to respect the rights and property of others, including other students, the faculty and the administration.
2. A student has the responsibility to be fully acquainted with the published University Student Rules found in the Student Handbook, Student Code of Conduct, on our website, University Catalog and students must comply with them and the laws of the land.
3. A student has the responsibility to recognize that student actions reflect upon the individuals involved and upon the entire university community.
4. A student has the responsibility to recognize the University's obligation to provide an environment for learning.
5. A student has the responsibility to check their university email for any updates or official university notification.
6. We expect that students will behave in a manner that is dignified, respectful, and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

Writing, Language, and Digital Composing Center:

The Writing, Language, and Digital Composing Center supports graduate and undergraduate students in all three colleges as well as faculty and staff. Tutors work with students to develop reading skills, prepare oral presentations, and plan, draft, and revise their written assignments. Our language tutors support students enrolled in Spanish courses and students composing in Spanish for any assignment. Our digital studio tutors support students working on digital projects such as eportfolios, class presentations, or other digital multimedia projects. Students can schedule appointments through JagWire under the Student Services tab. Click on "Writing, Language, and Digital Composing Center" to make your appointment. The Center offers face-to-face, synchronous online, and asynchronous digital appointments. More information about what services we offer, how to make an appointment, and how to access your appointment can be found on our website at <https://bit.ly/WLDCCenter>.

Violations of Academic Conduct (Section 14.5 Student Handbook)

Students at Texas A&M University-San Antonio are expected to adhere to the highest standards of academic honesty and integrity. Academic misconduct for which a student is subject to penalty includes cheating, plagiarism, fabrication, multiple submissions, misrepresentation of academic records, facilitating academic dishonesty, unfair advantage, violating known safety requirements and ethical misconduct. Students are expected to do their own course work. Simple cases of first offense cheating or plagiarism by an individual student may be handled by the instructor after consultation with the department chair. The student is usually confronted with the evidence in private and advised of the penalty to be assessed. The evidence will be retained for at least one full year. For more serious cases, such as those involving repeated offenses, conspiracy with other students or the theft and selling of examination questions, a report should be made by the instructor via the department chair and college dean to the Office of Student Rights and Responsibilities.

Academic dishonesty is a violation of the Student Code of Conduct; therefore, the instructor SHALL report any form of academic dishonesty to the Office of Student Rights and Responsibilities. Both parties (provider and copier) will be held responsible for the misconduct. Please review the Student Handbook for a complete description of the process. Penalties for academic dishonesty may range from a grade of F on the particular paper or in the course to expulsion from the University.

Considering the potential consequences of academic misconduct, it is obviously in students' best interests to avoid even the appearance of such behavior. If a student is unclear whether a specific act might constitute academic misconduct, please she/he should contact the instructor for an assessment of the situation.

All student term papers and other written assignments are subject to analysis by anti-plagiarism software. Posting of any class work given to students, or solutions, or discussion, on publicly accessible forums or on social media is not permissible.

Key Dates for Spring 2024 Semester

The complete academic calendar is available online:

<https://www.tamusa.edu/about-us/provost/documents/ay2024-calendar-01112023.pdf>

January 16	First class day
January 31	Census Date
February 14	Graduation application fee payment deadline
February 26-March 8	Midterm grading period
March 11-17	Spring break
April 13	Last day to drop with an automatic grade of "W"
April 20	Last day to withdraw from the university
April 29	Last day of scheduled classes for weekday classes
May 1-7	Final examinations
May 13	All grades due by noon
May 16	Grades available in JagWire

ACCT 5331-600 Class Schedule

The provisions and information set forth in the schedule below are intended to be informational and not contractual in nature. Changes may be made during the semester to meet student learnings needs. All changes will be announced in Blackboard and you are responsible for the announcements made in Blackboard.

Week	Date (R)	Class Meeting Topic	Online Topic	Assignment & Project
Week 1	1/18	Course Introduction; Install Tableau and Python; WRDS Database	<i>Reading Materials</i>	Demo in Blackboard; Week 1 assignment
Week 2	1/25	Analytics Mindset and Types of Accounting Analytics	<i>Introduction to Python - Part 1</i>	Lab project #1: ETL case study
Week 3	2/1	ETL Overview	<i>Introduction to Python - Part 2</i>	Python assignment #1
Week 4	2/8	Project: ETL Cases 1-4		
Week 5	2/15	Introduction to VBA; <i>Review Session for Python Assignment #1</i>	<i>Python - Tabular Data - Part 1</i>	Python assignment #2
Week 6	2/22	Midterm Exam		
Week 7	2/29	Project: ETL Case 5; <i>Review Session for Python Assignment #2</i>	<i>Python - Tabular Data - Part 2</i>	Python assignment #3; Lab project #2: IntegrateCo
Week 8	3/7	Project: IntegrateCo – Part 1 & Part 2		
Week 9	3/14	Spring Break		
Week 10	3/21	Project: IntegrateCo – Part 3; <i>Review Session for Python Assignment #3</i>	<i>Python - Tabular Data - Part 3</i>	Python assignment #4
Week 11	3/28	Project: IntegrateCo – Part 4; Introduction to Tableau		Lab project #3: DuPont
Week 12	4/4	Financial Statement Analytics; Project: DuPont–Parts 1 & 2; <i>Review Session for Python Assignment #4</i>	<i>Python Visualization & Regression (The visualization part is optional)</i>	Python assignment #5
Week 13	4/11	Project: DuPont–Parts 3&4; <i>Review Session for Python Assignment #5</i>		
Week 14	4/18	Open Lab: No Class Meeting		Prepare for the final project presentation
Week 15	4/25	Student Presentation		
Week 16	5/1- 5/7	Final Project		Final Project Write-up Due