



ACCT423 (SMU-X)

Audit Analytics

AY2024/2025 Term 1

Instructor(s)

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Course Prerequisites

ACCT331 Audit and Assurance

Course Description

With a rapidly changing regulatory environment, stakeholders are demanding more confidence and value from audit, particularly with the emergence of technologies such as data analytics. Data analytics is significantly changing the way auditors approach and conduct audit, where data is now brought to life to allow an in-depth risk assessment and more continuous real-time audit procedures to be performed – subjecting entire populations to audit procedures, not just samples.

This course examines the application of data analytics in audit based on an underlying risk-based methodology with real-life examples. Students will also learn about practical aspects in the audit analytics process such as extraction, transformation and loading of data as well as the actual execution of audit analytics tests and visualisation of the results in software such as Tableau.

By the end of the course, students, in their respective groups, are expected to conceptualise the application of audit analytics in real-life companies through development of prototype dashboards. Guidance from Deloitte audit partners will be provided through meetings with the students throughout the course.

Learning Goals, Course Objectives and Skill Developments

This course contributes to the development of the following learning goals:

- LO1.1 Our students can recognize, develop, measure, record, validate and communicate financial and other related information.
- LO1.2 Our students can analyze, synthesize and evaluate financial and other related information for decision making in a management context.
- LO1.3 Our students understand and can apply concepts relating to business processes, audit and assurance.
- LO2.1 Our students understand and can apply business concepts and principles.
- LO2.2 Our students can communicate effectively in a business context.

Texts and Other Resources

Readings:

There is no textbook assigned for this course. Articles and other required readings will be assigned over the course of the semester.

Assessment

To pass this course, a student is required to obtain a **total** mark of 50% or better. The assessment components for this course are:

Class Participation and Activities	10%
Individual Progress Assignments	
<i>Take-Home Assignments</i>	20%
<i>Progress Assessment</i>	20%
<i>(The take-home assignments and progress assessment will cover practical assessments of both analytics process and conceptual application)</i>	
Group Project Final Presentation and Demo	25%
Group Project Final Report	25%
Total	100%

No questions verbatim from past year papers or published test banks will be used for the graded continuous assessments and examinations in the course.

Lesson Plan

Class sessions are of three-hour duration per week. The following is a tentative lesson plan:

Week	Topic
1	<ul style="list-style-type: none"> • Introduction to the course <ul style="list-style-type: none"> - What is Data Analytics - Phases of the Audit - Types of Data Analytics (in Audit)
2	<ul style="list-style-type: none"> • Application of Data Analytics in Audit (1) <ul style="list-style-type: none"> - Plan the audit - Exploratory data analytics - Obtain understanding of entity and its environment - Perform preliminary analytical procedures - Identify and assess risk of material misstatement - Design tailored audit procedures - Obtain an understanding of a population
3	<ul style="list-style-type: none"> • Audit Analytics Process (1) <ul style="list-style-type: none"> - Extract the data <ul style="list-style-type: none"> - Understanding of relational tables in database - Methods of data extraction - Data storage and security - Prepare the data for use <ul style="list-style-type: none"> - Data formats - Conversion of data formats - Use of SQL <p>Take-home assignment 1</p>
4	<ul style="list-style-type: none"> • Audit Analytics Process (2) <ul style="list-style-type: none"> - Run the analytics tests <ul style="list-style-type: none"> - Use of SQL • Allocation of projects to teams in class <p>Take-home assignment 2</p>

5	<ul style="list-style-type: none"> • Audit Analytics Process (3) <ul style="list-style-type: none"> - Interpret the outputs - Use of Tableau <p>Take-home assignment 3</p>
6	<ul style="list-style-type: none"> • Team meeting with Deloitte mentors for understanding of the real-life company assigned • Application of Data Analytics in Audit (2) <ul style="list-style-type: none"> - Tests of operating effectiveness of controls <ul style="list-style-type: none"> - Inspect or re-perform controls - Evaluate deficiencies in controls - Perform substantive procedures <ul style="list-style-type: none"> - Test of details
7	Progress assessment
8	Term Break
9	<ul style="list-style-type: none"> • Group Project Progress Presentation for proposal of audit analytics scope
10	<ul style="list-style-type: none"> • Application of Data Analytics in Audit (3) <ul style="list-style-type: none"> - Perform substantive procedures <ul style="list-style-type: none"> - Substantive analytical procedures - Automation of manual procedures - Iterative uses of data analytics - Evaluate results <ul style="list-style-type: none"> - Types of misstatements - Exceptions due to imprecision in expected outcome - Deviations in a nonmonetary test - Errors identified through other types of testing - Concluding analytical procedures
11	<ul style="list-style-type: none"> • Development of prototype dashboard(s) and consultation for final project and presentation (1)
12	<ul style="list-style-type: none"> • Development of prototype dashboard(s) and consultation for final project presentation (2)
13	<ul style="list-style-type: none"> • Final presentation to audit partners on the audit analytics solutions proposed (30 mins per group)

Academic Integrity

All acts of academic dishonesty (including, but not limited to, plagiarism, cheating, fabrication, facilitation of acts of academic dishonesty by others, unauthorized possession of exam questions, or tampering with the academic work of other students) are serious offences. All work (whether oral or written) submitted for purposes of assessment must be the student's own work. Penalties for violation of the policy range from zero marks for the component assessment to expulsion, depending on the nature of the offense. When in doubt, students should consult the instructors of the course. Details on the *SMU Code of Academic Integrity* may be accessed at <https://smu.sharepoint.com/sites/oasis/SitePages/DOS-WKLSWC/UCSC.aspx>

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SMU strives to make learning experiences accessible for all. If you anticipate or experience physical or academic barriers due to disability, please let me know immediately. You are also welcome to contact the university's disability services team if you have questions or concerns about academic provisions: DSS@smu.edu.sg. Please be aware that the accessible tables in our seminar room should remain available for students who require them.

Digital Readiness for Teaching and Learning (DRTL)

As part of emergency preparedness, instructors may conduct lessons online via the Zoom platform during the term, to prepare students for online learning. During an actual emergency, students will be notified to access the Zoom platform for their online lessons. The class schedule will mirror the current face-to-face class timetable unless otherwise stated.

Prepared by: Varella Gino Lee, 27 May 2024
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