Instructor

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Consultation times: Anytime, but please email to make an appointment.

Teaching Assistants:

G1: TBC

G2: TBC

Course Prerequisites

ACCT101/111 (Financial Accounting) or ACCT105 (Financial Accounting for Law).

Course Description

Accountants regularly work with large amounts of financial and non-financial data. Data modelling is an important means through which accountants can analyse such data for trends, patterns, relationships, and other useful information for decision making. This course will introduce a variety of quantitative techniques used in the development, implementation, and utilization of analytical data models that accountants regularly use in decision making. It will cover techniques including trend analysis, optimization, and simulation.

Visualization provides an important means through which accountants can communicate insights obtained via data modelling to their intended recipients. Well-designed visualisations can improve the memory, comprehension, and decision making of intended recipients of this information. This course will introduce students to key principles and techniques for data visualization. Students will create visuals including dashboards and interactive visualisations for decision making in the accounting context.

Learning Goals, Course Objectives, and Skill Development

This SMU-X 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.
- LO2.2 Our students can communicate effectively in a business context.
- LO2.4 Our students can use Information Technology tools to analyse financial and other related information as well as communicate this to relevant stakeholders within a business context.

This SMU-X course offers an experiential learning opportunity that allows students to translate classroom knowledge and theory into practical solutions for real organizations.

Texts and Other Resources

Readings:

Course notes and selected articles from various sources will be uploaded to eLearn.

Other Resources:

MS Excel will be used extensively during the course. Students are to ensure that the Analysis ToolPak and Solver add-ins are enabled in MS Excel:

https://support.office.com/en-us/article/Use-the-Analysis-ToolPak-to-perform-complex-data-analysis-6c67ccf0-f4a9-487c-8dec-bdb5a2cefab6#__toc309744625

https://support.office.com/en-us/article/load-the-solver-add-in-in-excel-612926fc-d53b-46b4-872c-e24772f078ca

Tableau Desktop will also be used. Students are to ensure that they register for a student license and install the software: https://www.tableau.com/academic/students.

NOTE: Students are reminded that Excel and Tableau are just tools to aid in the DMV process. Their use in this course is not an indication that these tools are the best available in the market. Rather than focus on the tools being used, students should instead focus on the principles behind the DMV process.

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 (Individual)	10%
In-Class quiz I (Individual)	25%
In-Class quiz II (Individual)	25%
Group project (Group)	40%
Total	**100%**

No questions verbatim from past year exams/quizzes or published test banks will be used for the graded continuous assessments in the course.

Lesson Plan

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

Week	Topic
1	Introduction to data modelling and visualization + Visual design principles (Pre-seminar recording)
2	Tableau fundamentals (Pre-seminar recording) + Dashboards & storytelling
3	Advanced data modelling using Tableau + Client/project introduction
4	Project consultations - project plan/proposal
5	Visualization and dashboarding using Power BI
6	Time series analysis
7	In-class quiz I Project consultations – progress updates
8	Recess
9	Optimization
10	Simulation
11	Project consultations – final review
12	In-class quiz II + Course summary
13	Final project presentations

Note: This schedule is tentative and subject to change. The detailed course work plan will be announced in class.

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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Accessibility

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 student accessibility support team if you have questions or concerns about academic provisions: accessibility@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: Clarence Goh, 25 Sep 2024

Vetted By: Seow Poh Sun, 11 Oct 2024