



**ACCT424 (SMU-X)
Auditing Information Systems
Course Outline 2024/2025 Term 2**

Instructor(s)

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Course Description

This course examines IT systems and environment used to support the business processes common across various industries. The course helps to recognize how IT affects flows of business transactions, identify relevant technology elements, and assess risks arising from IT elements. Topics in the course will include the understanding, identifying and testing relevant to GITC (General IT Controls) and evaluate deficiencies in GITCs and assess the impact of GITC deficiencies on the audit.

Moreover this course will also touch upon ways in which IT audit report documentation is done and audit observations are assessed, handled and addressed. Lastly the course will also give a quick overview of regulatory guidelines in place like technology risk management, outsourcing risk or business continuity management stipulated by Monetary Authority of Singapore (MAS).

The course will use class activities, case study, simulations, real world examples and group discussions to increase the practicality of the knowledge content. Course is a perfect blend for individuals who are willing to learn about the IT elements considered in audit and compliance assessments.

Learning Objectives

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.

- LO2.2 Our students can communicate effectively in a business context.
- LO2.3 Our students understand the principles of leadership and team building 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
- LO3.1 Our students understand and can apply the ethical principles relevant to accounting professionals.

Students are expected to demonstrate the following technical accounting competencies upon successful completion of this course:

1. Identify the relevant flows of transactions (processes) and the relevant IT environments.
2. Understanding IT Environment, IT controls and testing the IT controls.
3. Testing General IT Controls (“GITC”) and testing approach of such controls.
4. Understanding concept of segregation of duties and functioning of interfaces between application systems.
5. Documentation of reports and process/procedure on handling exceptions.
6. Technology Regulations and its assessment procedures.

However, learning outcomes should be beyond just technical accounting competencies. In particular, this course seeks to develop your versatility, individual competencies and awareness of ethics and responsibilities through the various class and assessment activities:

- Analytical skills: Analytical skills will be developed through assignment case studies and quizzes and they include incomplete data and unstructured question sets. Class activities are also designed to train students’ analytical skills.
- Communication: Students will be assessed on class participation and group presentation.
- Team work: Students will be working in a team for their assignments this course. In addition, students will be asked to work together in breakout sessions during lesson time.
- Active learning: Students should be prepared to invest some time in self-learning tools such as Microsoft Visio. During the assignments, students will also participate in scenario-based case studies as Information System auditors with a client so they get hands-on and active learning experience.
- Professional ethics: Ethical concepts and constructs are integrated throughout the course.

Course Prerequisites

Students should take this course after completing **ACCT221 Accounting Information Systems** or **IS304 Process Modelling & Solution Blueprinting** or **IS210 Business Process Analysis and Solutioning** course.

Assessment Details

Category	Score	Remarks
Class Participation	20%	<ul style="list-style-type: none"> a) Attendance b) Contributions in terms of making insightful comments during classroom discussions/lectures, active engagement in group activities. Refer to Annex 1.
Assignment # 1-3	25%	<p>Assignment case study will be given during Week #2 Lecture</p> <p>Assignment #1: Audit Engagement Phase 1: Planning and Scoping (5%)</p> <ul style="list-style-type: none"> a) Deliverables: Process flow diagram and Risk and Control Mapping <p>Assignment #2: Audit Engagement Phase 2: Executing Engagement (10%)</p> <ul style="list-style-type: none"> a) Deliverable: Working papers for Test of Design <p>Assignment #3: Audit Engagement Phase 3: Documenting Engagement (10%)</p> <ul style="list-style-type: none"> a) Deliverable: Working papers for Test of Operating Effectiveness <p>Grading criteria: completeness, accuracy, clarity of documentation, depth of analysis and how it relates to concepts taught during the lectures and each appropriate phases of an engagement.</p>
Assignment # 4	10%	<p>Assignment #4: Audit Engagement Phase 4: Concluding Engagement (10%)</p> <ul style="list-style-type: none"> a) Deliverable: Final Report, Presentation Slides b) Grading criteria for report: Clarity of report including quality of recommendations and arguments c) Grading criteria for presentation: body language and professional manner, oral communication skills including persuasiveness, quality & clarity of responses to questions. Quality of slides is also included.
Peer Evaluation	5%	Group members will assess their own team throughout all groupwork including their contribution, qualitative inputs, and useful feedback etc.
Graded Simulated Case Studies	20%	<p>2 graded simulation case studies will take place over 2 separate weeks.</p> <p>Grading criteria for: completeness, accuracy, clarity and depth of analysis and how it relates to concepts taught during the lectures, body language and professional manner, oral communication skills including persuasiveness, quality & clarity of responses to questions.</p>

Quiz (3 Quizzes)	15%	Quiz # 1 – Week 4 Quiz # 2 – Week 9 Quiz # 3 - Week 11
Student Reflection	5%	

Assignments (35%) and Peer evaluation (5%)

Students are to work in the group formed (not more than 5 per group). The same group will need to work together for all case study assignments. Details of case study assignments will be given during week 2, groups will be formed then and formalized via email communication to the students.

Group members are entitled to have rounds of interactions with members from Deloitte to discuss about the assignment and seek guidance on its deliverables and any key learnings. Assessment criteria for all four assignments are included in the section on “*Assessment Details*”. All submissions are via e-Learn portal.

For the last assignment, each group will be given 15 minutes* to outline their solution, recommendations, approach, followed by 10 minutes for Q&A. The panel will probe and question the team during the presentation so as to assess the ability to reason critically in areas taught during the course.

**timing varies based on the total number of groups.*

Graded simulated case studies (20%)

There will be 2 simulations based on case studies (simulating real life scenario) during 2 separate weeks of the term. Students will be given a handout on the case studies and be given a certain amount of time (i.e. half an hour) to prepare the case studies. After which, they will present to the facilitator and be assessed based section indicated on “*Assessment Details*”. Each activity is 10% towards the final grades.

Quizzes (15%)

Quizzes: There will be 3 (5% each) quizzes and each quiz will be conducted as per the dates stated in the “*Assessment Details*”. Each quiz will compose of about 10 True/False, multiple-choice questions and/or multi-select type of questions. Quiz questions will focus on the concepts covered in the previous lectures and application of these concepts. 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	Instructional Method/Strategy
1 13-Jan	<p>Lecture</p> <ul style="list-style-type: none"> • Introduction to course and expectations • Basic overview of Audit vs Information System Audit • Overview of an audit engagement and lifecycle • Introduction to Process, Risk & Controls • Business Process Flow Diagram (high-level) 	<p>Every session will have an activity or breakout group that last between 15 minutes to 30 minutes. Ice-breaker session.</p> <p>Recommended Reading–</p> <ul style="list-style-type: none"> • <i>IT Audit Career roadmap</i> • <i>COSO Framework in brief</i>
2 20-Jan	<p>Lecture</p> <ul style="list-style-type: none"> • Basic IT Environment and IT Organization • IT Process Flow Diagram • IT Risk • Control objectives, control activities, assertions • Understanding Types of Controls & Testing • Risk and Controls Mapping <p>Introduction to Case Study Assignment</p>	<p>Every session will have an activity or breakout group that last between 15 minutes to 30 minutes. Use of wooclap or kahoot for classroom response.</p> <p>Recommended Reading –</p> <ul style="list-style-type: none"> • <i>COBIT framework in brief</i> • <i>General Auditing Standards by PCAOB</i>
3 27-Jan	<p>Lecture</p> <ul style="list-style-type: none"> • Testing Controls (Design Effectiveness) • Testing Controls (Operating Effectiveness) • Introduction to General IT Controls <ul style="list-style-type: none"> - Data Center and Network Operations (DCNO) - Access Security Controls - Change Management 	<p>Every session will have an activity or breakout group that last between 15 minutes to 30 minutes. Use of wooclap or kahoot for classroom response.</p>

Week #	Topic	Instructional Method/Strategy
4 3-Feb	Lecture <ul style="list-style-type: none"> • Understanding & Testing Access Security Controls • User Access Management • Privilege Access Management • Testing Logical Access Review / Segregation of Duties Quiz # 1	Every session will have an activity or breakout group that last between 15 minutes to 30 minutes. Use of wooclap or kahoot for classroom response.
5 10-Feb	Lecture <ul style="list-style-type: none"> • Understanding & Testing Change Management Controls • Understanding & Testing Data Center Network Operations Controls • Data Center Controls & Environmental Security End of week 5: Submit Case Study Assignment #1	Every session will have an activity or breakout group that last between 15 minutes to 30 minutes. Use of wooclap or kahoot for classroom response. Assignment #1 Planning and Scoping
6 17-Feb	Lecture <ul style="list-style-type: none"> • Practicing professional skepticism • Documenting work papers and best practices • Reflection on the Assignment 1 	Every session will have an activity or breakout group that last between 15 minutes to 30 minutes. Use of wooclap or kahoot for classroom response.
7 24-Feb	Graded simulated case study #1 Interaction with Deloitte Audit and Assurance (IT, Data and Analytics) Partner End of week 7: Submit Case Study Assignment #2	Every session will have an activity or breakout group that last between 15 minutes to 30 minutes. Use of wooclap or kahoot for classroom response. Students working in breakout groups will be given case studies (simulating real life scenario) and they will need to present in class. <i>#2 - Handling difficult conversations</i> This will be graded. Assignment #2 Executing Engagement

Week #	Topic	Instructional Method/Strategy
8 3 Mar	Term Break – Recess week	
9 10-Mar	<ul style="list-style-type: none"> Graded simulated case study #2 Reflection on the Assignment 2 Quiz # 2 End of week 9: Submit Case Study Assignment #3	Students working in breakout groups will be given case studies (simulating real life scenario) and they will need to present in class. <i>#1 – Identify Risk and Controls</i> This will be graded. Assignment #3 Documenting Engagement
10 17-Mar	<ul style="list-style-type: none"> Networking Session in Deloitte premises* 	Details will be shared closer to the visit.
11 24-Mar	<ul style="list-style-type: none"> Report Writing Soft skills as an Auditor Quiz # 3 End of week 11: Submit Case Study Assignment #4	Every session will have an activity or breakout group that last between 15 minutes to 30 minutes. Use of wooclap or kahoot for classroom response. Assignment #4 Concluding Engagement
12 31-Mar	No lesson Preparation for presentation and student journal	
13 7-Apr	Case Study Assignment Presentation – Session # 1	Refer to the above “Assessment details” for expectations and judging criteria Judging panel to consist of senior management from Deloitte Risk Advisory Practice.

Week #	Topic	Instructional Method/Strategy
14 14-April	Case Study Assignment Presentation – Session # 2	Refer to the above “Assessment details” for expectations and judging criteria Judging panel to consist of senior management from Deloitte Risk Advisory Practice.

Attendance

Students are required to attend all class meetings. However, accidents, illness, services to the nation, and other misfortunes do occur and are generally not predictable and are outside one’s control. As such, students will not be penalized for missing classes under such reasons, subject to clear communication to the instructor concerned. Students are required to submit documentary evidence to the instructor and the SMU Management Office.

Even with acceptable reasons, students are still required to achieve 75% attendance for the course. If a student expects to be absent for an extended period of time (3 class meetings or longer) for a valid reason, he/she must apply for Leave of Absence in advance.

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

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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.

Vetted by: Seow Poh Sun, 11 October 2024