NEW YORK UNIVERSITY – STERN SCHOOL OF BUSINESS DEPARTMENT OF ACCOUNTING INTERNAL CONTROLS & ACCOUNTING INFORMATION SYSTEMS ACCT-6415 SUMMER 2024

Instructor: Prof. Joel Lanz, MBA, CPA/CGMA/CITP, CFE, CISSP, CISA, CISM

Email: jl31@stern.nyu.edu

Office Hours: Tu-Th 9-9:30 or by appointment

Phone: 516-933-3662 (If I do not pick up, please leave a message with alternate times to return

your call).

Class Sections of Internal Controls and Accounting Information Systems:

Note: Class is also scheduled for 7/23 2:00-4:55pm

DATES	ACCT-GB.6415	DAY	TIME	LOCATION
7/9-8/13	C1-5174	Tu & Th	9:30-12:25	Tisch UC19

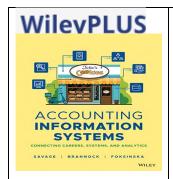
Course Objectives/Goals:

GB 6415 will help prepare you for an increasingly complex world where technology continues to influence and disrupt existing business models and service delivery strategies. My goal is to prepare you for a successful transition to public practice, industry, or government by understanding how to audit, use, and take part in the design of accounting information systems.

During our time together, you will learn how to assess, design, and consider the impact of IT risks and corresponding controls on financial reporting and business operations. Our lectures, discussions, and assignments will focus on how managers address IT and business processes to help achieve organizational goals and ensure accurate financial reporting. Through selected tasks that simulate real-world professional accounting challenges, you will gain confidence in your developing abilities to assess system controls and to effectively design risk mitigation strategies for systems for which you could provide assurance or advisory services. Some of you will use this knowledge directly or contribute to various aspects of acquisition and merger due diligence assignments. As appropriate, we also examine selected IT-related regulatory and financial reporting developments.

You will be graduating into an increasingly competitive global marketplace clamoring for professionals who can provide better information assurance, reliability and the ability to facilitate business development opportunities and performance. IT professionals have the technical expertise necessary to ensure the secure configuration of IT hardware or the proper deployment of technology solutions. Yet, their solutions lack the CPA's or financial manager's perspective and ability to understand the complicated business implications, governance challenges, and risks associated with technology.

Course Materials:



We will be using the WILEYPLUS VERSION OF

Savage, A., Brannock, D. & Foksinska, A (2021). *Accounting Information Systems: Connecting Careers, Data, and Systems.* New Jersey: Wiley.

The required book for this course, **Accounting Information Systems** by Savage, will be delivered to you digitally through the **WileyPlus platform**. The **cost of the book and platform is \$102.50**, which will be added as a "book charge" to your bursar bill.

If you choose to find your course materials elsewhere, you must login here to the student portal and opt out of the program by July 11th. If you do not opt out by this date, you will be charged.

Once you purchase access, please enter the following course id B31524 to access our class and related assignments.

Assessment and Grade Determination:

SEGMENT	% OF GRADE	DESCRIPTION
Two Exams (33% each)	66%	Further information on the exams will be provided during the semester. Tests can only be taken individually within the established timing parameters. Communicating test contents or assisting others during the test is prohibited and subject to academic policies /discipline.
Graded Homework (Post-Lecture)	17%	You have one attempt to complete. Specific assignments are included in the course schedule below. Although individually submitted you may work on (and discuss) the assignments with others prior to submission. Unless noted in the course schedule below, each homework consists of 10 multiple choice (50%) and 4 "task-based simulations (50%).
PRE-Class Adaptive Assignments	5%	Adaptive assignments are tailored for the individual. They are generally due the evening prior to the assigned lecture.
Value Add Provided to Class – contributions during class or as specified by the professor	class meetings you create value for all of us (you, your colleagues a so usually requires that you appropriately prepare for class. Prepara completing "before class" activities identified for the class session. I	
		I appreciate that some might be "uncomfortable" with speaking individually or as a spokesperson for a group and therefore may avoid doing so in class. Yet to master course content, discussion is required. Everyone makes mistakes – including me - and as a result, we learn from each other. Please consider that the best learning stems from being uncomfortable and seeking resolution. I am also trying to simulate professional practice so that you will be more comfortable as you begin your career.
		If for any reason you feel that you are not included or continue to be uncomfortable in providing value add as described above, please let me know I want to hear from you. As the situation dictates, I will determine an

equivalent method of providing value add.
It is important to contribute throughout the semester, as a lack of contribution in one unit cannot be made up for in another unit. Please maintain a log of your value-add contributions for submission and my review at the end of the semester. I will review further requirements and supply a log template during class.

The following grading guidelines are a basis for determining grades: A's – awarded for excellent work; B's – awarded for good or very good work; C's – awarded for adequate work; D's awarded for minimally passing and F's - awarded for unsatisfactory or inadequate work.

<u>Tentative Course Schedule (Subject to Change)</u>

We will discuss preparation and study strategies during our first class. We rely on the text and accompanying textbook videos to deliver foundational knowledge. In class we will focus on the more challenging topics and provide greater opportunity to apply knowledge through homework assignment review and class discussions. Please also note the colors used to identify the contents for each exam.

DATES	TOPICS	Class Prep	In Class	GRADED HW & Post- Class
7/9 (Tu)	Course Orientation. Accounting as Information	Read Welcome to Your Wiley Course Read or View Ch 1 View Ch 1 Professional Interviews	Syllabus walkIthru WileyPLus walkIthrough AIS and the profession Lecture Ch 1 DQ 11 AA 1	Due 7/15 MC 2, 4, 8, 15, 16, 17, 18, 19, 20, 21 AA 2, 4, 7, 7, 13. Post-Class: Read or View Ch 1 as needed.
7/11 (Th)	Risk and Risk Assessments	Read or View Ch 2 View Ch 2 Professional Interviews Do Ch 2 PRE-Class Adaptive Prep for In Class	Lecture Ch 2 DQ 1, 6 As time permits: Begin Ch 3	Due 7/15 MC 4, 6, 7 8, 12, 17, 18, 19, 24, 26 AA 2, 3, 4, 5a Post-Class: Read or View Ch 2 as needed.
7/16 (Tu)	Risk Management & Internal Controls	Read or View Ch 3 View Ch 3 Professional Interviews Do Ch 3 PRE-Class Adaptive Prep for In Class	Lecture Ch 3 Video #2 Discuss AA 5 As time permits: Begin Ch 4	Due 7/22 MC 2, 3, 6, 8, 11, 12, 13, 18, 23, 24. AA 2, 3, 6, 7a Post-Class: Read or View Ch 3 as needed.
7/18 (Th)	Software and Systems	Read or View Ch 4 View Ch 4 Professional Interviews Do Ch 4 PRE-Class	Lecture Ch 4 DQ 10, AA2, 5 As time permits:	Due 7/22 MC 2, 3, 4, 8, 9, 10, 13, 14, 17, 18. AA 1, 6, 7, 8.

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		Adaptive Prep for In Class	Begin Ch 8	Post-Class: Read or View Ch 4 as needed.
SELF LEARN/REVIEW ¹	Data Storage and Analysis	Read or View Ch 5 Recommend View Ch 5 Professional Interviews	NOTE: Self-study	None. MC at end of chapter recommended
7/23 (Tu) am	Documenting Systems and Processes	Read or View Ch 8 View Ch 8 Professional Interviews Do Ch 8 PRE-Class Adaptive Prep for In Class	Lecture Ch 8 Class problems – To be determined	Due 7/29 MC 1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14, 15, 16, 17. AA 1, 3, 8 (Note 14 MCQ=70% plus 3 AA= 30%). Post-Class: Read or View Ch 8 as needed.
7/23 (Tu) pm SUBMIT BY 7/24 (We) 6 PM	MIDTERM EXAM (EXAM #1)	Scope of Exam is Chapters 1-5.		
7/25 (Th)	Human Resources and Payroll Processes	Read or View Ch 9 View Ch 9 Professional Interviews Do Ch 9 PRE-Class Adaptive Prep for In Class	Lecture Ch 9 DQ2 AA3 Part 2, AA Part 2, AA 9 Note: May continue to 7/30	Due 7/29 MC 2, 4, 5, 8, 10, 14, 15, 16, 18, 19. AA 1, 2, 5, 7 Post-Class: Read or View Ch 9 as needed.
7/30 (Tu)	Purchasing and Payments Processes	Read or View Ch 10 View Ch 10 Professional Interviews Do Ch 10 PRE-Class Adaptive Prep for In Class	Lecture Ch 10 DQ5, DQ9	Due 8/5 MC 1, 3, 4, 6, 7, 8, 9, 10, 12, 14, 15, 17, 18, 19. AA 3, 5, 6. (Note 14 MCQ=70% plus 3 AA= 30%).
8/1 (Th)	Continue	Continue	As time permits: Begin Ch 11	Continue
8/6 (Tu)	Marketing, Sales and Collections	Read or View Ch 12 View Ch 12 Professional Interviews Do Ch 12 PRE-Class Adaptive	Lecture Ch 12 Class problems to be determined	Due 8/12 MC 5, 7, 8, 9, 10, 12, 13, 15, 18, 20 AA 3, 6, 7, 9

¹ Students may have already studied contents of this basic chapter. This chapter presents the material from an AIS perspective. Reading or watching the video will provide a good foundation for many. I welcome the opportunity to meet with you individually, should you need further instruction.

			Prep for In Class		
	8/8 (Th)	Continue	Continue	Continue	Continue
Ī	8/13 (Tu)	FINAL EXAM	Scope of the exam is		
ı		(EXAM 2)	Chapters 8-10 and 12.		

Recommended approach to learning the subject matter

You will find that the "Accounting Information System" course differs from other accounting courses as it is not financial or numerical based. You may need to adopt a different study process than what might have worked well for you in other accounting courses. Consider leveraging study techniques used in Auditing, Management, MIS, and Economics courses in developing your study plan. Innovative, creative problem-solving and "outside the box" thinking will help you master course contents and grading components.

A helpful technique is to assume you are the owner or CFO of a business familiar to you (or use the illustrative company in the text – Julia's Cookies). As you read, view, prepare and study the course materials, ask yourself how an owner or CFO would use the information presented and apply it to their business. Many prior students have recommended this approach as significantly enhancing their understanding and performance.

Before you begin specific course activities, please review the "Welcome to Your Wiley Course" in WileyPLus. The "Looking for Help" section has study suggestions (Study Help). Although many graduate students may feel this is unnecessary, those attempting the CPA exam may want to consider refreshing their skills to maximize their skills to prepare for the licensing exam. The "How to Succeed in the Course" introduces the text and its tools.

Given the uniqueness and challenges of the course, following are my suggestions for working through each assignment. Obviously, this will need to be customized based on your unique needs, objectives, and background. Only requirements designated as MANDATORY will be DIRECTLY CALCULATED IN YOUR GRADE (however, doing the recommended or highly recommended actions will significantly improve your performance and grades).

ACTION	WHY	REQUIREMENT
Scan (don't read yet) the chapter and read the chapter preview (beginning of chapter) and the learning objectives review (end of chapter).	Become familiar with the chapter contents and form a preliminary assessment of your knowledge and prior exposure to the contents.	Recommended
Watch featured professional videos.	Feature real accounting professionals discussing their career paths and how they apply course concepts in their daily professional tasks. These videos will help introduce you to professional practice and provide an appreciation of how chapter contents may apply to your professional work.	Highly Recommended
In the course resources section, work through the questions included in the practice questions.	These questions are generally easy and are organized by learning objectives. Can help you assess how much you already know about the subject and develop a more effective study approach for the chapter.	Recommended
Either read the chapter text <u>or</u> watch the textbook author's video. (For most students, reading would	Some learn better by reading and some by watching a video. The eTextbook supports highlight, notetaking, read aloud, and search.	Highly Recommended

be the most effective option).	The textbook author's videos walk students through key concepts at the learning objective level to reinforce understanding. NOTE: THIS IS YOUR PRIMARY SOURCE FOR LEARNIG FOUNDATIONAL COURSE CONTENTS.	
Watch the chapter's featured professional video.	Features real accounting professionals discussing their career paths and how they apply course concepts in their day-today – especially during the first five years of a CPA's career. We will discuss some but not all. These short videos provide practical perspectives on how chapter contents may be used in practice. We will also discuss in class.	Highly Recommended
Complete the PRE-class adaptive assignment (due prior to the designated lecture).	These assignments help you assess your understanding of core textbook concepts prior to attending lecture. You keep taking the assignment until you achieve your desired score.	MANDATORY (Optional PRE-class adaptive for chapter 1 and 5)
Attend class and participate in the discussion.	Class lecture and discussions will generally focus on how text material is applied in practice and practical considerations of the material for those entering the profession. Student questions on reading and videos will also be discussed.	MANDATORY (To gain value add points you need to be in class and participate).
Post-class review	Revisit the text or videos to reinforce key or challenging topics. Both are organized by subtopics allowing you to focus.	Recommended
Prepare and submit homework	Questions are identified above. For the "application and analysis" questions, drop-down choices are provided.	MANDATORY
Review and Study for exams	Using personal preferences and techniques, study for the exam. This can include but is not limited to reviewing class notes, homework, key textbook concepts.	Highly Recommended
Complete the EXAM-readiness adaptive assignment.	Developed by the textbook author to help identify areas that need focus before an exam (textbook not lecture material).	Recommended
Take the exam	Further guidance will be provided during the semester.	MANDATORY

General Course Notices, Policies and Design Considerations

ACADEMIC INTEGRITY

Our undergraduate Academics Pillar states that we take pride in our well-rounded education and approach our academics with honesty and integrity. Indeed, integrity is critical to all that we do here at NYU Stern. As members of our community, all students agree to abide by the NYU Academic Integrity Policies as well as the NYU Stern Student Code of Conduct, which includes a commitment to:

- Exercise integrity in all aspects of one's academic work including, but not limited to, the preparation and completion of exams, papers and all other course requirements by not engaging in any method or means that provides an unfair advantage.
- Clearly acknowledge the work and efforts of others when submitting written work as one's own. Ideas, data, direct quotations (which should be designated with quotation marks), paraphrasing, creative expression, or any other incorporation of the work of others should be fully referenced.
- Refrain from behaving in ways that knowingly support, assist, or in any way attempt to enable another person
 to engage in any violation of the Code of Conduct. Our support also includes reporting any observed
 violations of this Code of Conduct or other School and University policies that are deemed to adversely affect
 the NYU Stern community.

The Stern Code of Conduct and Judiciary Process applies to all students enrolled in Stern courses.

- For graduate students, information can be found here: https://www.stern.nyu.edu/uc/codeofconduct.
- For undergraduates, information can be found here: https://www.stern.nyu.edu/portal-partners/current-students/undergraduate/community/com munity-expectations.

To help ensure the integrity of our learning community, prose assignments you submit to NYU Brightspace will be submitted to Turnitin. Turnitin will compare your submission to a database of prior submissions to Turnitin, current and archived Web pages, periodicals, journals, and publications. Additionally, your document will become part of the Turnitin database.

GENERAL CONDUCT & BEHAVIOR

Students are also expected to maintain and abide by the highest standards of professional conduct and behavior. Please familiarize yourself with Stern's Policy in Regard to In-Class Behavior & Expectations:

- (https://www.stern.nyu.edu/portal-partners/registrar/policies-procedures/general-policies/code-conduct)
- (http://www.stern.nyu.edu/portal-partners/current-students/undergraduate/resources-policies/academic-policies/index.htm); and the NYU Student Conduct Policy
- (https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-student-conduct-policy.html).

GRADING GUIDELINES

At NYU Stern, we strive to create courses that challenge students intellectually and that meet the Stern standards of academic excellence. To ensure fairness and clarity of grading, the Stern faculty have agreed that for elective courses the individual instructor or department is responsible for determining reasonable grading guidelines.

STUDENT ACCESSIBILITY

If you will require academic accommodation of any kind during this course, you must notify me at the beginning of

the course and provide a letter from the Moses Center for Student Accessibility (212-998-4980, mosescsa@nyu.edu) verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the Moses Center for Student Accessibility, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation. For more information, visit the CSA website: https://www.nyu.edu/students/communities-and-groups/student-accessibility.html

STUDENT WELLNESS

Our aim is for students to be as successful academically as they can, and to help them overcome any impediments to that. Bookmark the NYU Stern Well-being Resource Hub (https://www.stern.nyu.edu/wellbeing) for existing services at NYU and Stern covering a wide variety of topics including financial well-being, relationship well-being, mental well-being, and more. Any student who may be struggling and believes this may affect their performance in this course is urged to contact the Moses Center for Student Accessibility (see also the Student Accessibility section of this syllabus) at 212-998-4980 to discuss academic accommodations. If mental health assistance is needed, call the NYU's 24/7 Wellness Exchange hotline 212-443-9999. Furthermore, please approach me if you feel comfortable doing so. This will enable me to provide relevant resources or referrals. There are also drop in hours and appointments. Find out more at http://www.nyu.edu/students/health-and-wellness/counseling-services.html

NAME PRONUNCIATION AND PRONOUNS

NYU Stern students now have the ability to include their pronouns and name pronunciation in Albert. I encourage you to share your name pronunciation and preferred pronouns this way. Please utilize this link for additional information: Pronouns & Name Pronunciation

RELIGIOUS OBSERVANCES AND OTHER ABSENCES

NYU's Calendar Policy on Religious Holidays states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. You must notify me in advance of religious holidays or observances that might coincide with exams, assignments, or class times to schedule mutually acceptable alternatives. Students may also contact religiousaccommodations@nyu.edu for assistance.

Except for religious observances or other absences that may be required in compliance with nondiscrimination law, this class otherwise requires attendance and participation and cannot accommodate conflicts. Please review all class dates at the start of the semester and review all course requirements to identify any foreseeable conflicts with exams, course assignments, projects, or other items required for participation and attendance.

LAPTOPS, CELL PHONES & OTHER ELECTRONIC DEVICES

The use of electronic devices (e.g., tablets or laptops), for the purpose of note-taking only, is permitted. However, students should make every effort to avoid distracting their classmates or disrupting the class, including arriving early and choosing a seat that is less distracting for peers. Violations of the above will be subjected to course grade reductions.

INCLUSION STATEMENT

This course strives to support and cultivate diversity of thought, perspectives, and experiences. The intent is to present materials and activities that will challenge your current perspectives with a goal of understanding how others might see situations differently. By participating in this course, it is the expectation that everyone commits to making this an inclusive learning environment for all.

OTHER ISSUES

Re-Grading:

Students are encouraged to respect the Professor's grading system's integrity and authority and discouraged from pursuing arbitrary challenges. If a student feels that an error has been made in grading anindividual assignment or assessing the overall course grade, a request to have the grade re-evaluated may be submitted. Students should submit such requests in writing to the Professor within seven days of receiving the grade, including a brief written statement supporting the concern.

Class Conduct and Participation:

If someone's behavior is disturbing you, please let me know. We must respect everyone's learning environment. Please attend class and be thoroughly prepared to discuss the assigned readings and assignments to maximize various course grades. Students must engage in appropriate professional behavior that includes prompt arrival to class. Other expectations include courteous participation in class (i.e., being attentive while others are speaking, dedicatingyour attention to this class while the lecture is in session, and leaving class at the designated time), and professional preparation for class. To prepare for class professionally, you should read the assignments before class, watch videos, solve assigned problems, engage in-class discussions (or optional forums), and actively participate in group activities.

Contributions and class participation during our use of cases and assignments constitute an integral part of our shared experience. Your active participation helps me evaluate your overall performance as a student (as well as making the class more interactive and engaging for all of us as we address issues that many Accounting professionals consider complex and challenging). I value the quality of your participation more than the quantity. Some find it uncomfortable to present viewpoints in a large group setting or even to partner on a team- yet, contributing to discussions and being an active team member is an essential part of your professional development and future success as a CPA. Please do not hesitate to contact me if you are looking for "equivalent" ways to contribute in a manner that makes you feel comfortable. One way is to participate in the online forums

Make-up Exams & Assignments

The need for make-up exams will not be granted except in <u>EXTREMELY UNUSUAL</u> situations. Any exceptions are at the sole discretion of the instructor.

Course Inclement Weather Contingency Plan

In case of inclement weather (e.g., snow), please monitor your email. Should NYU announce a closure, we will follow their instructions. Should NYU not announce a closure, if a significant storm impacts my ability to get to campus, I will send an email (via Brightspace) by 7 am on the morning of the impacted class letting you know that we will be switching to remote class for that session. Should you need to know before 7 am please let me know. If you can not make it to class due to weather, please let me know as well.

NYU STERN Policies:

Unless specifically identified in the syllabus, default Stern policies apply to this course. The school expects that students will conduct themselves with respect and professionalism toward faculty, students, and others present in class and will follow the rules laid down by the instructor for classroom behavior. Students who fail to do so may be

asked to leave the classroom. Students are encouraged to work together on homework assignments. Course evaluations are beneficial to students who come after you and to us. Please complete them thoughtfully. Your class will be recorded for educational purposes. The entire Stern Student Code of Conduct applies to all students enrolled in Stern courses and is available at:

- Undergraduate College: http://www.stern.nyu.edu/uc/codeofconduct
- Graduate Programs: http://w4.stern.nyu.edu/studentactivities/involved.cfm?doc_id=102505

Student Contact Information

Student contact information must be kept current to receive important notices from the school and me. Your contact information is **online via your NYU Brightspace course email**. Please check your local address, local phone number, and emergency contact information on the school's Web and revise as needed. <u>All-important class notices, including class communications</u>, will be sent only to your NYU Brightspace email address.

Students with Disabilities

If you have a qualified disability and will require academic accommodation of any kind during this course, you must notify me at the beginning of the course and provide a letter from the Moses Center for Students with Disabilities (CSD, 998-4980, www.nyu.edu/csd) verifying your registration and outlining the accommodations they recommend. If you need to take an exam at the CSD, you must submit a completed Exam Accommodations Form to them at least one week before the scheduled exam time to be guaranteed accommodation.

DON'T BE SHY – CONTACT ME IF HELP IS NEEDED. In-person appointments are available before class, via telephone or zoom on most weeknights and weekends (yes, weekends) Alternatively, call my number anytime, and if possible, I will respond. If leaving a message, provide three alternative times (and send an email – so that I can respond) so that we can agree on a time.

COURSE DESIGN CONSIDERATIONS - Influence of recent Professional organization activities on course design:

The CPA Evolution initiative is transforming the CPA licensure model to recognize the rapidly changing skills and competencies the practice of accounting requires today and will require in the future. Technology concepts will also be incorporated into all Core and Discipline sections as the impact of advances in technology on our profession continues to grow. Per the January 2024 CPA Exam Blueprints, material covered in this course in included in the AUD (Auditing and Attestation) Core and ISC (Information Systems & Controls) Discipline Sections. Please expect that as more information and guidance for the new CPA exam emerge, we may adjust topics presented in the syllabus. The course will also help you prepare for several topics on the new exam (2024). Specific foundational AIS topics typically found at the undergraduate level are expected to receive additional attention as part of the new core exams, especially Auditing.

Relevant to this course on the AUD core section, the assessment incorporates data and technology concepts with a focus on understanding how data is structured and flows through underlying systems, verifying the completeness and accuracy of source data and using the outputs of data analytic techniques to assist in risk assessment or to complete planned procedures.

- Understanding an entity's IT environment and related IT general controls. The IT environment consists of an entity's IT infrastructure, applications, processes to manage access to the IT environment and program change control, including personnel responsible for those processes.
- Use of data and information including requesting, preparing and transforming data, reliability of data and information and data analytics.

Sample representative tasks identified in the AUD Exam Blueprint covered in the course includes but are not limited to:

- Understand the elements of an entity's control environment, including the design and implementation of IT general controls and entity-level controls.
- Perform procedures to obtain an understanding of how an entity has responded to risks arising from the use of IT, including identifying and testing the design and implementation of relevant IT general controls
- Identify and document the significant business processes and data flows that directly or indirectly impact an entity's financial statements.
- Perform a walkthrough of a significant business process and document (e.g., flow charts, process diagrams, narratives) the flow of relevant transactions and data from initiation through financial statement reporting and disclosure.
- Obtain an understanding of an entity's IT infrastructure (e.g., ERP, cloud computing or hosting arrangements, custom or packaged applications) and document the procedures performed to obtain that understanding.
- Obtain an understanding of IT applications that are, directly or indirectly, the source of financial transactions or the data used to record financial transactions (e.g., how the entity uses IT applications to capture, store, and process information).
- Perform tests of the design and implementation of relevant automated and manual transaction-level internal controls (e.g., authorizations and approvals, reconciliations, verifications, physical or logical controls, segregation of duties).
- Identify and document the relevant automated and manual controls within the flow of an entity's transactions for a significant business process and consider the effect of these controls on the completeness, accuracy and reliability of an entity's data.
- Conclude whether relevant automated and manual transaction-level internal controls are effectively designed and placed in operation.
- Explain the components of a relational database (e.g., tables, records, fields/ attributes, primary and foreign keys, normalization).
- Determine attribute structures, format, and sources of data needed when making a data extraction request to complete planned procedures. Determine methods to transform (e.g., preparing, cleaning, scrubbing) data to complete planned procedures.

The course also provides learners with a brief introduction to the Information System and Controls (ISC) discipline section of the CPA Exam) that tests the knowledge and skills that CPAs must demonstrate with respect to information systems.