

NEW YORK UNIVERSITY – Stern School of Business
DEPARTMENT OF ACCOUNTING
INTERNAL CONTROLS AND ACCOUNTING INFORMATION SYSTEMS
 ACCT-GB.6415
 Summer 2016

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

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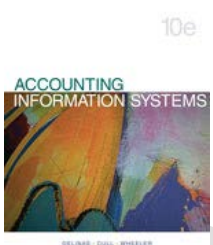
Class Sections of Internal Controls and Accounting Information Systems:

DATES	ACCT-GB.6415 Section #	DAY	TIME	LOCATION
7/6-8/16	70	MW	9:00-11:55	TBD
7/6-8/16	71	MW	1:00-3:55	TBD

Note: Subject to space limitations and prior instructor and your “homework team” approval, students may attend either section’s lecture. Students may only submit exams in the section that they are registered for.

Course Materials:

The following course material is required:

	Accounting Information Systems, 10th Edition Ulric J. Gelinas Richard B. Dull Patrick Wheeler ISBN-13: 9781133935940
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COURSE OBJECTIVES/GOALS:

The purpose of this course is to help prepare you for a successful career in public practice, industry, or government by understanding how to audit, use, and participate in the design of accounting information systems. The course will also help students learn how to assess and consider the impact of IT governance, risk, and compliance, on business, and service delivery operations. The course will focus on how IT affects business process and controls and their impact on financial reporting. After completing the course students will understand how to assess accounting system controls and to effectively design risk mitigation strategies for systems for which they have management responsibility. Students should also be able to leverage this understanding in contributing to various aspects in acquisition and merger due diligence assignments. Recent regulatory and financial reporting developments will also be discussed.

An increasingly competitive global marketplace has organizations clamoring for better information assurance and the additional business development facilitation and

performance insight enabled by technology. While IT professionals have the technical expertise necessary to ensure that IT hardware is secure or technology solutions are properly deployed, their solutions lack the Certified Public Accountant (CPA) or financial manager's perspective and ability to understand the complicated business implications, governance challenges and risks associated with technology. This course will help students bridge the gap between the accounting and information technology professions.

Information technologies impact every aspect of accounting, including financial reporting, managerial accounting, auditing and tax. The nature of the work done by CPAs and financial managers continues to evolve as these technologies advance. In a number of organizations, the technology function now reports to the Chief Financial Officer ("CFO") or their designee. The storage of business assets and financial information has led to recent professional pronouncements requiring that accounting professionals understand the technology controls used to process and record this information. As information increasingly becomes digitalized, significant opportunities exist for accounting professionals and their firms to leverage technology tools to become more efficient in performing traditional services and open opportunities for new client services. This course will help students understand these opportunities and help them facilitate the management of these risks.

Responding to the above opportunities, the AICPA has recently introduced a variety of new assurance services enabling professionals to provide assurance in technology-related environments including Trust Services, Privacy Framework and Risk Advisory. The AICPA has also introduced a specialty credential – Certified Information Technology Professional (CITP) and an Information Technology section. This course will help students prepare for the exam.

ISACA (formerly known as Information Systems Audit and Control Association) engages in the development, adoption and use of globally accepted, industry-leading knowledge and practices for information systems including the development and administration of the Certified Information Systems Auditor (CISA) and Certified Information Systems Manager (CISM) programs. ISACA is also responsible for the development and maintenance of CoBIT, a leading framework for the governance and management of enterprise IT. Students will learn about this and other frameworks used in the AIS discipline.

The course is composed of the following topics and their approximate percentage of course time:

- Conceptual foundations of Accounting Information Systems and flowcharting (10%)
- Control and audit of Accounting Information Systems including Information Security and System Reliability (30%)
- Corporate Governance (including COSO) and Technology Risk Management (20%)
- System Development Process and IT Vendor Management Oversight

- including System Implementation, Change Control and Operations (10%)
- Application Controls emphasizing the Revenue and Expenditure Cycles (30%)

COURSE REQUIREMENTS AND GRADING:

SEGMENT	% OF GRADE
Professional Behavior and Class Participation	10%
Term Project	20%
Two Exams (@ 35% each)	70%

Grades are determined following the Undergraduate College Grading Guidelines:

A's – awarded for excellent work

B's – awarded for good or very good work

C's (or below) – awarded for adequate or below work.

Re-Grading:

In line with Grading Guidelines for NYU Stern, the process of assigning grades is intended to be one of unbiased evaluation. This means that students are encouraged to respect the integrity and authority of the professor's grading system and discouraged from pursuing arbitrary challenges to it.

If a student feels that an inadvertent error has been made in the grading of an individual assignment or in 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 7 days of receiving the grade, including a brief written statement supporting the request.

Professional Behavior and Class Participation:

Students will accumulate points by participating in class by asking questions or by successfully responding to questions posed during class. Points in this category can only accumulate by attending and actively participating in class.

NOTE 1: Depending on time availability in class, there may not be time for everyone to participate in every session. It is important that you proactively manage your participation and not wait to be called on in order to achieve the maximum grade for this category.

NOTE 2: Students are expected to have completed the reading assignment and attempt assigned problems to the best of their ability prior to class. Students will be at a significant disadvantage during lectures if they do not come appropriately prepared.

NOTE 3: The class time will consist of combined lecture/discussion of chapter material, and review of assigned homework. You are expected to contribute to the review of homework. Students will organize themselves into teams of five. Teams will be called upon to lead the discussion of homework problems. Quality and effectiveness of team

discussions will be incorporated into the student's grade for this component.

Term Project:

The term project provides students with the flexibility to choose and focus efforts on an Accounting Information Systems-related topic that is most relevant to them and their career. Students can choose from **one** of the following “pre-approved” options:

OPTION A

Use any of the COSO Publications (available at www.coso.org) to analyze a current or historical event relating to any topic in the MS in Accounting curriculum. The goal of the project is to prepare a simulated written presentation to a client in the same industry in which the event occurred that illustrates lessons learned from the event and how the client can use the COSO guidance to avoid a similar problem. The following chart provides examples of projects based on illustrative COSO publications:

ILLUSTRATIVE COSO PUBLICATIONS	ILLUSTRATIVE TERM PROJECT
COSO in the Cyber Age: Report Offers Guidance on Using Frameworks to Assess Cyber Risks (2015)	How to leverage the COSO guidance to avoid a major breach (e.g., choose one -JP Morgan, Target, SONY, etc.).
Leveraging COSO Across the Three Lines of Defense (2015)	How the three lines of defense could have prevented major trading scandals (e.g., choose one SOC GEN, Barings).
Enterprise Risk Management for Cloud Computing	Capital One is using AWS (Amazon Web Services) as a central part of its technology strategy – what cloud risks must bankers manage.
Improving Organizational Performance and Governance: How the COSO Frameworks Can Help.	Choose a business in trouble (or previously in trouble) and discuss how use of the COSO frameworks can or did enhance the performance of the business

OPTION B

Review a well-known study, analysis, book or manual within the AIS discipline. The goal of the project is to prepare a simulated written presentation to a client as to why they should implement the guidance provided for in the publication along with examples from industry to support the presentation's recommendations. Potential publications include:

- “CIS Controls for Effective Cyber Defense Version 6.0” (registration required).
- “Common Sense Guide to Mitigating Insider Threats, 4th Edition.” CMU/SEI-2012-TR-012. Software Engineering Institute, Carnegie Mellon University. 2012.
- AICPA’s “Audit Analytics and Continuous Audit,” 2015.
- ISACA’s “The Cyber Resilient Enterprise: What the Board of Directors Needs to Ask.”
- ACFE/AICPA’s “Managing the Business Risk of Fraud: A Practical Guide.”

- NIST’s Cybersecurity Framework (Executive Order 13638).
- “IT Risk: turning Business Threats into Competitive Advantage,” by George Westerman and published by Harvard Business School Press, 2007. (may require purchase)

OPTION C

Successfully complete a “CPA Exam Difficulty” level exam based on AICPA content specification outlines for topics within the scope of Accounting Information Systems.

(Some questions may not have been covered in class or in the text- this option is best for those currently preparing for the AUD and BEC sections of the exam and may require the purchase/use of CPA exam review materials). (Note: Selection of this will require attendance at a designated time outside of official scheduled class time to take the exam).

In addition to receiving credit for the term project, the following special conditions apply.

- If the student receives an 84 or higher on the exam (no curves!!!), the student will receive an A as their course grade.
- Scores of 70 and above will be deemed equivalent to the “excellent” level, scores between 60-70 will be deemed equivalent to the “good” level, and scores below 60 will be deemed equivalent to the “adequate” level per the rubric below for determining the term project grade.

OPTION D

Create your own project

This will require a half-page written proposal and WRITTEN professor approval of the topic prior to submission of the project.

The following rubric will be used for grading the term project (except for those having exam scores). Generally, submissions are expected to have 20-25 “PowerPoint” slides. The presentation is expected to include appropriate reference citations and compliance with University policies (e.g., footnotes as required).

EXCELLENT (90%+)	GOOD (80-89%)	ADEQUATE (79% -)
Deliverable is well organized and clearly written. The underlying logic is clearly articulated and easy to follow. Words are chosen that express the intended meaning and support reader comprehension. Diagrams or analyses enhance and clarify presentation of ideas. Sentences are grammatical and free from spelling errors. Material is readable and the graphics highlight and support the main ideas.	Deliverable is organized and clearly written for the most part. In some areas the logic or flow of ideas is difficult to follow. Words are well chosen with some minor exceptions. Diagrams are consistent with the ideas presented. Sentences are mostly grammatical. Material is mostly readable and graphics reiterate but may not support the main ideas.	Deliverable lacks overall organization or clarity. Reader has to make considerable effort to understand the underlying logic and flow of ideas. Diagrams are absent or inconsistent, Poor grammar makes the deliverable difficult to understand. Major aspects of the analysis or recommendations are absent. Diagrams or graphics are confusing.

Two Exams:

Further information on the exams will be provided during the semester. Make-up exams

will only be given for extremely highly unusual and extraordinary cases of **MEDICALLY DOCUMENTED** emergencies.

As many of you will be starting your professional career at the end of the semester, a special alternative exam date will be available (current anticipated date is Saturday August 13). As there are limited seats, seat assignment for the alternative date will be assigned based on the following priorities:

- Upon recommendation of your academic advisor, those with job conflicts (including location/geography-related job conflicts) impacting post-graduation jobs.
- Those selecting the OPTION C Term Project (see above) as they will be taking the OPTION C exam on this date. (Student's option if they want to take both exams on the same date).

Any decisions or exceptions to make up exams are at the sole and final discretion of the Professor.

GENERAL COURSE NOTICES

Students are expected to attend class and to be thoroughly prepared to discuss the assigned readings and assignments. Professional standards continually evolve and change. As part of their professional development, students will need to learn how to monitor developments and maintain their competencies.

All participants must engage in appropriate professional behavior. Professional behavior is characterized by the following attributes: prompt arrival to class, courteous behavior in class (i.e., being attentive while others are speaking, dedicating your attention to this class while the class is in session, leaving class at the designated time, etc.), and professional preparation for class. To prepare for class professionally, you should read the assignments prior to class, prepare assigned problems, engage in class discussion, and actively participate in group activities.

Consider the following additional points as you prepare for class:

- You should be prepared to discuss all readings on the dates assigned. We will not have enough time to cover everything that is important in the class, so you must take the initiative to raise questions on material that you do not understand.
- As clients expect from a licensed professional and their practice, appreciate the effort required to properly prepare for class.
- Leverage group study and automated tools to manage your time. As in the real world, you are encouraged to “network with your peers” as necessary (except for exams which should be done individually only) to prepare for and complete assignments – both in-person and using discussion boards.
- I have arranged for all classes to be recorded. Recorded classes are usually available within 24 hours. If there is a particular aspect of the lecture that you wish to rehear, note the time in your notes as this will facilitate your ability to

access that particular aspect of the lecture.

Use of Electronic Devices in Class

While electronic/wireless devices can enhance the teaching and learning experience, they can also be a potential source of distraction to students, instructors, and the classroom setting. In keeping with the opportunistic aspects of technology that serves as the course theme, these devices will be permitted subject to the following terms:

Students are welcome to use electronic devices during class that enhance their performance. However, the use of these resources must be “appropriate” for an academic setting. Examples of appropriate use during class include note taking on laptops or tablets; use of smartphones to calendar events/assignments; use of devices to complete quick internet searches for pertinent information. If students engage in “inappropriate” use of electronics within the class, then their right to use these devices in the future will be removed. Examples of inappropriate use include but are not limited to texting your friends or reading “non-AIS” texts while in class; sending emails/texts (an occasional and very limited “read” is permitted as long as not abused), surfing the net for non-class purposes (e.g., Facebook, LinkedIn and other social media). Additionally, as class lectures will be recorded in accordance with University practices, individual recordings of any type of class lecture (video or audio) is prohibited.

If there are ongoing issues with numerous students, I will remove the privilege from all students to ensure the necessary standards of an academic setting. Lack of compliance with these terms will impact the student’s grade. *Students will be penalized five points of their class participation score for violating the above. If you need to “multi-task” please let me know prior to the start of the class and sit in a designated section that will not disrupt your fellow student’s attention.*

Academic Integrity:

Integrity is critical to the learning process and to all that we do here at NYU Stern. As members of our community, all students agree to abide by 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.

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 for homework assignments.
- Course evaluations are important to us and to students who come after you. 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 can be found 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 in order to receive important notices from the school and from me. Your contact information is **online via your NYU Learns course e-mail**. Please check your local address, local phone number, and emergency contact information on the school's Web and revise as needed. All-important class notices, including class communications, will be sent only to your NYU Classes 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 will need to take an exam at the CSD, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation.

GENERAL COURSE ADVICE:

Many Accounting majors find the subject matter of this course challenging. Former students (as well as my own observations) have identified and provided the following

suggestions to enhance your ability to succeed in this course.

AIS differs from other accounting courses as it is not financial or numerical based. This will require that students adapt a different study process than what might have worked well for them in other accounting courses. Consider leveraging study techniques used in Auditing, Management, MIS and Economics courses in developing your study plan.

Relating to the proposed CPA Exam revisions (estimated 2017), invitation to comment respondents support the consideration of testing higher-order skills beyond basic content knowledge, i.e., critical thinking, problem solving, analytical ability and professional skepticism. The AICPA is increasing its assessment of these higher-order skills throughout each section of the Exam. As a result, the two exams will reflect these testing considerations. You will need to demonstrate the ability to apply course contents – not just memorize and understand.

Review answers to chapter discussion questions as well as answers provided to end of chapter problems by the TEAMS. This will help develop your ability to apply what you are learning.

DON'T BE SHY – CONTACT ME IF HELP IS NEEDED. Appointments available before and after class (in-person), weeknights and weekends (yes, weekends!!!) – via telephone or skype. Alternatively, just call my number anytime, and if available I will respond. If leaving a message provide 3 alternative times (and send email – so that I can respond back) so that we can agree on time.

COURSE SCHEDULE (subject to change)

<u>DATE</u>	<u>LEC #</u>	<u>LECTURE COVERAGE</u>
July 6-W	1	Unit 1
July 11-M	2	Unit 1/Unit 2
July 13-W	3	Unit 2
July 18-M	4	Unit 3
July 20-W	5	Unit 3
July 25-M	6	Test #1/Unit 4
July 27-W	7	Unit 4/Unit 5
Aug 1-M	8	Unit 5
Aug 3-W	9	Unit 6
Aug 8-M	10	Unit 6/Unit 7
Aug 10-W	11	Unit 7/Term Projects Due
Aug 15-M	12	Test #2

Unit Descriptions, Content, Readings and Homework

NOTE1: For the short answer assignments (e.g., matching), teams should be prepared to discuss why they chose a particular response). Although short answer, the matching exercises (and class discussion of the homework) will help you learn how to apply the course concepts).

NOTE2: At the end of each chapter, there is a listing of key terms (with page numbers were to find the definition), review questions, and discussion questions. Except for UNIT 1, students should always review these prior to class. I will post the answers to the review and discussion questions prior to class. These questions will not be reviewed in class unless students request to review prior to class. I will be available prior to and after classes to review individual requests not covered during class.

Unit #	Gelinas Chapters	Lecture Discussions	HW and Class Problems
1 Class Orientation and Course Introductory Concepts	1, 2, 3 & 4	<ul style="list-style-type: none"> • Is information technology considered a business issue (why/why not)? • What are the pain points and threats associated with IT? • What are the different strategies for governing IT? • SFAC 2 Information Qualities – What are the different components? • What are the critical AIS impact on CPAs and Management Accountants? • How is AIS covered on the CPA exam? • What are the qualities of information and what do they mean? • What roles does the accountant perform in the AIS environment? • How to connect software modules? • What are the pros and cons of ERP systems? • What are the different types/modes/methods of data processing? • What are the pros and cons of conducting business on the internet? 	Primarily background information for the course. Amount of reading depends on individual's background. Scan chapters and read based on prior technology coursework and knowledge.
2 ERM and Internal Control	7	<ul style="list-style-type: none"> • Do you remember what you learned about internal control in the Auditing course? • What is the impact of information technology on COSO's 17 Principles? • What are the differences between COSO and COSO ERM? 	SP 7-2 (Matching) SP 7-3 (Matching) P 7-1 (Matching)

		<ul style="list-style-type: none"> • What are the eight elements of COSO's Enterprise Risk Management—Integrated Framework? • How does management employ internal control systems as part of organizational and IT governance initiatives? • How do internal control systems help organizations achieve objectives and respond to risks? • What are the typical control goals for operations and information processes? • What are the major categories of control plans? • What tools are used to help document and assess controls? 	<p>P 7-3 (Matching) P 7-4 (Matching)</p>
3	8	<ul style="list-style-type: none"> • What are the major pervasive controls that organizations employ as part of their internal control structure? • How do pervasive controls help ensure continuous, reliable operational and IT processes? • What are the top cybersecurity controls employed by organizations to reduce threats to an acceptable level? • How do organizations plan and organize all resources, including IT resources, to ensure achievement of its strategic vision? • What are the major controls used to manage the design and implementation of new processes, especially new IT processes? • How does the monitoring function in ensuring the overall effectiveness of a system of internal controls? • What is the COBIT framework and does it impact internal control? • What are some of the considerations for critical general controls including segregation within the IT function, change control, business continuity and protection of technology assets (including data)? 	<p>SP 8-1 (Matching) SP 8-2 (Matching) P 8-3 (Matching) P 8-5 (Segregation of Duties) P 8-6 (CoBIT Matching) P 8-7 (Matching)</p>
4	17	<ul style="list-style-type: none"> • What is the systems acquisition/ development process and its major phases and steps? • What are the differences and considerations regarding the development process for acquiring a system versus developing it in-house? • What is the nature and importance of the accountant's involvement in the systems acquisition/development process? 	<p>SP 17-3 (Very Short Essay)</p>
5	9	<ul style="list-style-type: none"> • How can IT issues – both errors and fraud - impact the financial audit (refresher from auditing course)? 	<p>SP 9-1 – (Matching) SP 9-3 –</p>

<p>Process and Application Controls</p>		<ul style="list-style-type: none"> • What are the more popular concerns expressed by the PCAOB in their inspections and which areas have they been focusing on? • What is the process used by professionals to complete the steps in the control framework and prepare a control matrix? • How do common business process and application controls accomplish control goals? • What is the importance of business process and application controls to organizations with enterprise systems and those engaging in e-business? • What is encryption and how is it used to secure business activity? 	<p>(Fill in) P9-1- (Flowchart and Matrix) P9-3 – (Match) P9-5 – (Flowchart and Matrix)</p>
<p>6 Revenue Cycle</p>	<p>10 and 11</p>	<ul style="list-style-type: none"> • What is the relationship between the OE/S process and its business environment? • How can the OE/S process to assist management decision making? • How can ERP add-ons, e-business, and other technologies can improve the effectiveness and efficiency of the OE/S process? • How do you read and prepare a control matrix for selected typical OE/S processes, including explanations of how business process control plans can accomplish OE/S operations and information process control goals? • What is the relationship between the B/AR/CR process and its business environment? • How can the B/AR/CR process assist management decision making? • How can enterprise systems, e-business and other technologies can improve the effectiveness of the B/AR/CR process? • How to prepare and read a control matrix for some typical billing and cash receipts processes, including an explanation of how business process control plans can accomplish operations and information process control goals? 	<p>SP 10-5 (Matching) P10-3 (Matching) P10-4 (Matching) P10-6 (Mini Case Study) SP 11-5 (Matching) SP 11-6 (Matching) P 11-3 (Matching) P 11-5 (Matching)</p>
<p>7 Payable Cycle</p>	<p>13</p>	<ul style="list-style-type: none"> • What is the relationship between the AP/CD process and the business environment? • How do various technologies, including e-invoicing and e-payments, improve the effectiveness of the AP/CD process? • How do you prepare and read a control matrix for a typical AP/CD process including an explanation of how business process control plans can accomplish operations and information process control goals? 	<p>SP 13-3 (Matching) SP 13-4 (Matching) P13-7 (Matching) TBD Flowchart and Matrix Exercise</p>

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