ITS462: INTRODUCTION TO IT AUDITING

Credit Hours: 3

Contact Hours: This is a 3-credit course, offered in accelerated format. This means that 16 weeks of material is covered in 8 weeks. The exact number of hours per week that you can expect to spend on each course will vary based upon the weekly coursework, as well as your study style and preferences. You should plan to spend 14-20 hours per week in each course reading material, interacting on the discussion boards, writing papers, completing projects, and doing research.

Faculty Information: Faculty contact information and office hours can be found on the faculty profile page.

COURSE DESCRIPTION AND OUTCOMES

Course Description:

This course introduces appropriate principles and guidelines that can be used in information security for information technology auditing. An overview of skills and techniques will be presented to evaluate potential risks in IT environments. Students will gain the ability to evaluate and quantify risks to reduce potential IT threats.

Course Overview:

ITS462 Introduction to IT Auditing provides students with the skills and knowledge necessary to assess programs and operations of an organization's IT infrastructure, ensuring that IT and business systems are monitored, managed and secure. Over the next eight weeks, you will learn a great deal about auditing an IT environment. This will include understanding the role of the auditor, audit process, asset identification, threat protection, and disaster recovery and business continuity planning. This course aligns with and prepares students to obtain, the Certified Information Systems Auditor (CISA) a certification issued by ISACA.

Course Learning Outcomes:

1. Describe the characteristics of an IT environment.
2. Discuss the weaknesses and risks that can influence an IT environment.
3. Identify appropriate IT controls.
4. Develop an appropriate plan for an IT audit.
5. Create a plan to manage IT audit resources.

PARTICIPATION & ATTENDANCE

Prompt and consistent attendance in your online courses is essential for your success at CSU Global Campus. Failure to verify your attendance within the first 7 days of this course may result in your withdrawal. If for some reason you would like to drop a course, please contact your advisor.

Online classes have deadlines, assignments, and participation requirements just like on-campus classes. Budget your time carefully and keep an open line of communication with your instructor. If you are having technical problems, problems with your assignments, or other problems that are impeding your progress, let your instructor know as soon as possible.

COURSE MATERIALS

Required tool:

uCertify. (2019). *CISA: Certified Information System Auditor study guide* (4th ed.). [Computer software]. Livermore, CA: uCertify LLC. ISBN: 9781119056249

NOTE: All non-textbook required readings and materials necessary to complete assignments, discussions, and/or supplemental or required exercises are provided within the course itself. Please read through each course module carefully.

COURSE SCHEDULE

Due Dates

The Academic Week at CSU Global begins on Monday and ends the following Sunday.

- **Discussion Boards:** The original post must be completed by Thursday at 11:59 p.m. MT and Peer Responses posted by Sunday 11:59 p.m. MT. Late posts may not be awarded points.
- **Mastery Exercises:** Students may access and retake mastery exercises through the last day of class until they achieve the scores they desire.
- **Critical Thinking:** Assignments are due Sunday at 11:59 p.m. MT.

WEEKLY READING AND ASSIGNMENT DETAILS

Module 1

Readings

- · Chapter 1 in *uCertify* (Read and view all content.)
- · Huckeby, J. (2019). Reasons to outsource your internal IT audit function. *ISSA Journal*, *17*(2), 9–22.
- · Wertheim, S. (2019). Auditing for cybersecurity risk. *CPA Journal*, *89*(6), 68.

Discussion (25 points)

Critical Thinking (60 points)

OPTION #1: Technology-related Regulations

For this assignment, write a well-written paper that addresses that following questions:

1. Discuss two technology-related regulations that you think are currently having the biggest impact on business and organizations.
2. How do these regulations influence how technology is implemented and managed?
3. If you were the CIO of a company that is impacted by one of these regulations, how would you convince the organization that an IT audit is in its best interest for maintaining compliance?

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

OPTION #2: Emerging Technology Challenges

For this assignment, write a well-written paper that addresses that following:

1. Research two emerging technologies and discuss the impact that each is having on regulation and auditing.
2. What are the challenges that this emerging technology is having on the audit process?
3. From an auditor's perspective. what concerns you most about emerging technology?

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

Mastery Exercise (10 points)

Module 2

Readings

· Chapter 2 in *uCertify* (Read and view all content.)
· Harguem, S., & Echatti, H. (2017). IT governance status in Tunisian banking sector. *Proceedings of the International Conference on Intellectual Capital, Knowledge Management & Organizational Learning*, 154.

Discussion (25 points)

Critical Thinking (60 points)

OPTION #1: Change Process Document
As a Certified Information Systems Auditor (CISA), you must be prepared to investigate whether process changes within the organization are accounted for with proper documentation.

Read the article, "Reshaping the IT Governance in Octo Telematics to Gain IT-Business Alignment" and respond accordingly.

Write a change process document based on the case study. This will be a document that Octo Telematics' could present to an auditor.

1. Explain the purpose and goals of Octo Telematics' process re-engineering (BPR) project.
2. Explain each of the major governance changes performed by Telematics. Describe the purpose of the change and include any difficulties or challenges related to the change.
3. Describe what steps were taken to troubleshoot problems that arose during the change process.

Reference

Vaia, G., & Carmel, E. (2013). Reshaping the IT governance in octo telematics to gain IT-business alignment. *Journal of Information Technology Teaching Cases, 3*(2), 88-95.

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

OPTION #2: Business Process Re-engineering Case Study

Read the article, "Reshaping the IT Governance in Octo Telematics to Gain IT-Business Alignment" and respond accordingly.

1. Discuss business process re-engineering (BPR) and its role in an IT audit. Describe some of the BPR methodologies.
2. Compare and contrast the BPR application steps discussed in Section 2.4 Overview of Business Process Reengineering of this week's reading in UCertify, to the steps taken by Octo Telematics to redesign its IT governance structure to better integrate the IT function with business clients.
3. Which of the common BPR problems discussed in Section Overview of Business Process Reengineering are found in the Octo Telematics case study? Were they resolved? What troubleshooting advice would you give Octo Telematics to help solve their BPR problems?

Reference
Vaia, G., & Carmel, E. (2013). Reshaping the IT governance in octo telematics to gain IT-business alignment. *Journal of Information Technology Teaching Cases, 3*(2), 88-95.

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

Mastery Exercise (10 points)

Module 3

Readings

- Chapter 3 in *uCertify* (Read and view all content.)
- Eggers, W., Turley, M., Kishnani, P. (2018) The future of regulation: Principles for regulating emerging technologies. Retrieved from https://www2.deloitte.com/us/en/insights/industry/public-sector/future-of-regulation/regulating-emerging-technology.html
- Wangen, G., Snekkenes, E., & Hallstensen, C. (2018). A framework for estimating information security risk assessment method completeness. *International Journal of Information Security,* 17(6), 681–699.

Discussion (25 points)

Critical Thinking (60 points)

OPTION #1: Auditor Skills and Ethics

For this assignment, write a well-written paper based on your own experience or on what you have learned during the course. Describe what a typical day is like for an IT auditor, and address the following items in your paper:

1. Describe three skills or qualities that you think are most important to be a successful IT auditor.
2. Discuss who should be involved in the audit process and the roles and responsibilities of each of the key players in the audit.
3. Discuss two conflicts of interest or ethical challenges that an auditor might encounter during an audit. Explain how you would deal with a conflict of interest or an ethical challenge.

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

OPTION #2: IT Audits and Regulations

For this assignment, write a well-written paper that addresses that following questions:

1. Choose an industry where you think an IT audit is necessary or would have the most impact.
2. Do you think this industry is currently being properly regulated? Provide examples of why or why not.
3. How could regulations be improved in this industry?

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

Mastery Exercise (10 points)

Module 4

Readings

· Chapter 4 in *uCertify* (Read and view all content.)
· Dzuranin, A. C., & Mălăescu, I. (2016). The current state and future direction of IT audit: Challenges and opportunities. *Journal of Information Systems*, *30*(1), 7.

Discussion (25 points)

Critical Thinking (60 points)

OPTION #1: The Impact Of Cloud Computing On IT Auditing

For this assignment, write a well-written paper that addresses that following:

Cloud Computing services have become an attractive technology choice for many organizations. Read the article, "Auditing the Cloud."

1. How does cloud computing impact an audit process? Do you think that the audit practices discussed in the course readings and the CISA certification successfully address issues related to cloud services?
2. Discuss any regulations or audit certifications that address the issue of cloud security. Do you think it is necessary for an IT auditor to have these certifications in addition to the CISA certification?
3. What cloud security and auditing issues concern you most?

Reference
Rittle, J., Czerwinski, J., & Sullivan, M. (2016). Auditing the cloud. *Internal Auditor*, *73*(4), 43.

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

OPTION #2: IT Auditing and Cloud Computing
Cloud Computing services have become an attractive technology choice for many organizations. Read the article, "Auditing the Cloud."

As the team lead you are responsible for making sure other members of the IT audit team remain updated on the latest technology concepts that have an impact on the IT audit process. For this assignment you will create a PowerPoint presentation that addresses the following:
- How does cloud computing impact the audit process? What kind of issues does cloud computing present to the auditor?
- Describe regulations or audit certifications that address the issue of cloud security.
- Describe the current top cloud security issues and why auditors must be aware of them.

Assignment Instructions
Your presentation must meet the following requirements:
- Include an introduction slide with the title of the presentation, your name, the submission date, and a reference slide.
- Create 8-10 or more slides of easy-to-understand content (text and visuals).
- Provide speaker's notes containing 50-100 words per slide to elaborate on the slide.
- In your notes, support slide content with at least 2-5 peer-reviewed, scholarly references. The CSU Global Library is a great place to find resources.
- Use these tips for creating presentations: Creating A Visual Presentation.
- Avoid distracting transition elements and animations.

Reference
Rittle, J., Czerwinski, J., & Sullivan, M. (2016). Auditing the cloud. *Internal Auditor*, *73*(4), 43.

Mastery Exercise (10 points)

Module 5

Readings

- Chapter 5 in *uCertify* (Read and view all content.)
- Topi, H., & Spurrier, G. (2019). A generalized, enterprise-level systems development process framework for systems analysis and design education. *Journal of Information Systems Education,* *30*(4), 253–265.

Discussion (25 points)

Critical Thinking (60 points)

OPTION #1: IT System Failures or Data Breaches

For this assignment, write a well-written paper that addresses that following:

Research two well-known IT system failures or data breaches that occurred in the last 10 years that were the result of faulty software design, planning, or management. Describe the failure and its impact on users of the system. Did the organization or business suffer damages as a result of the failure? Explain how the glitch or failure could have been avoided or reduced.

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

OPTION #2: Evolutionary Versus Revolutionary Software Development

Chapter 6 of this week's readings discusses evolutionary versus revolutionary software development. Research each software development approach and discuss the pros and cons of each method. Describe a scenario where a revolutionary approach would be preferred over an evolutionary approach, and vice versa.

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

Portfolio Milestone (60 points)

OPTION #1: Proposed Audit Schedule and Team Composition (paper)

You are an IT auditor and your team has been hired by a medium-sized software development firm to audit the company's IT infrastructure and operational procedures and processes. As the team lead, you are required to write a document about the proposed audit schedule and team composition. The goal of the document is to provide the auditee an understanding of when the major activities occur and who will be involved. In this case the auditee is the CIO. The document should include a checklist of the items necessary to perform the audit. The initial request should be sent several weeks in advance of any onsite activities and include at least the following components:

- Request access to relevant documents and records.
- Provide a list of the items the auditor is looking for, using common titles and a brief description (for example, a copy of the records management policy, security classification procedure, system certification procedure, organizational chart, and prior audit reports of software code reviews).
- Determine applicable site safety rules.
- Plan for the audit resources.
- Agree on observers' attendance and a guide for the audit team.
- Request audit team workspace needs, with technology services to support the audit workflow.

Assignment Instructions

Your well-written paper should meet the following requirements:

- Be 3-5 pages in length.
- Be formatted according to the CSU Global Writing Center.

- Include at least 2-5 scholarly or peer-reviewed articles. The CSU Global Library is a good place to find these resources.
- Include a title page, section headers, introduction, conclusion, and references page.

OPTION #2: Proposed Audit Schedule and Team Composition (presentation)

You are an IT auditor and your team has been hired by a medium-sized software development firm to audit the company's IT infrastructure and operational procedures and processes. As the team lead, you are required to create a PowerPoint presentation that explains the proposed audit schedule and team composition. The goal of the presentation is to provide the auditee an understanding of when the major activities occur and who will be involved. In this case the auditee is the CIO. The presentation should include a checklist of the items necessary to perform the audit. The presentation should occur several weeks in advance of any onsite activities and include at least the following components:

- Request access to relevant documents and records.
- Provide a list of the items the auditor is looking for, using common titles and a brief description (for example, a copy of the records management policy, security classification procedure, system certification procedure, organizational chart, and prior audit reports of software code reviews).
- Determine applicable site safety rules.
- Plan for the audit resources.
- Agree on observers' attendance and a guide for the audit team.
- Request audit team workspace needs, with technology services to support the audit workflow.

Assignment Instructions

Your presentation must meet the following requirements:
- Include an introduction slide with the title of the presentation, your name, the submission date, and a reference slide.
- Create 10 or more slides of easy-to-understand content (text and visuals).
- Provide speaker's notes containing 50-100 words per slide to elaborate on the slide.
- In your notes, support slide content with at least 2-5 peer-reviewed, scholarly references. The CSU Global Library is a great place to find resources.
- Use these tips for creating presentations: Creating A Visual Presentation.
- Avoid distracting transition elements and animations.

Mastery Exercise (10 points)

Module 6

Readings

- Chapter 6: System Implementation and Operations in *uCertify* (Read and view all content.)
- Mosweu, O., & Ngoepe, M. (2019). Skills and competencies for authenticating digital records to support audit process in Botswana public sector. *African Journal of Library, Archives & Information Science*, *29*(1), 17–28.

Discussion (25 points)

Critical Thinking (60 points)

OPTION #1: Process Mining and the Audit Process

Read the article, "Performing Tests of Internal Controls Using Process Mining" for this assignment and respond accordingly.

1. Explain what process mining is and how it can be used in the IT audit process.
2. How does process mining compare to other audit methods? Include audit methods that you learned about during the course.
3. In your opinion, do you think process mining can eliminate or improve upon some of audit methods taught in this course—especially in terms of testing internal controls?
4. Would you recommend using process mining as part of an IT audit? Explain why or why not.

Reference
Chiu, T., Brown-Liburd, H., & Vasarhelyi, M. A. (2019). Performing tests of internal controls using process mining. *CPA Journal*, *89*(6), 54.

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

OPTION #2: Process-mining-enabled Audit of Information Systems
Research process mining and how it is used to audit information and internal processes.

1. Based on your research, describe what process mining is and how can it improve or enhance the IT audit process.
2. How does process mining compare to traditional IT audit methods that you learned about during the course?
3. What are the challenges related to the process-mining process?
4. Would you recommend using process mining as part of an IT audit? Explain why or why not.

Your paper should be 4-5 pages in length and conform to the CSU Global Writing Center. Include at least 2-5 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

Mastery Exercise (10 points)

Module 7

Readings
· Chapter 7 in *uCertify* (Read and view all content.)
· Sokri, A. (2019). Cyber security risk modelling and assessment: A quantitative approach. *Proceedings of the European Conference on Cyber Warfare & Security*, 466–474.

Discussion (25 points)

Mastery Exercise (10 points)

Module 8

Readings

· Chapter 8 in *uCertify* (Read and view all content.)

· Phillips, R., & Tanner, B. (2019). Breaking down silos between business continuity and cyber security. *Journal of Business Continuity & Emergency Planning*, *12*(3), 224–232.

Discussion (25 points)

Final Exam (180 points)

This week you will take a two-hour exam in *uCertify*, which consists of multiple-choice questions and simulations. You can only take the exam once. This examination is a comprehensive examination, consisting of questions from all the course content. It is highly recommended that you read all the Recommended Readings as well.

Portfolio Project (120 points)

OPTION #1: Performing an IT Audit (paper)

For this assignment, assume you have been hired by a medium-sized software development firm to audit the company's IT infrastructure and operational procedures and processes. Before conducting the audit, the CEO of the company wants to know how an IT audit can benefit the company. Based on what you have learned during this course and your own research, write a well-written paper that describes the characteristics of an IT environment. This should include information about the network infrastructure and software-development practices. Discuss the operational and security concerns that are common to most networks, and identify appropriate controls for safeguarding assets, maintaining data integrity, and operating effectively to achieve the organization's goals or objectives.

Your paper should be 7-9 pages in length and conform to the CSU Global Writing Center. Include at least 7-8 scholarly references in addition to the course textbook. The CSU Global Library is a good place to find these references.

OPTION #2: Performing an IT Audit (presentation)

For this assignment, assume you have been hired by a medium-sized software development firm to audit the company's IT infrastructure, and operational procedures and processes. Before conducting the audit, the CEO of the company wants to know how an IT audit can benefit the company. Based on what you have learned during this course and your own research, create a PowerPoint presentation that describes the characteristics of an IT environment. This should include information about the network infrastructure and software-development practices. Discuss the operational and security concerns that are common to most networks, and identify appropriate controls for safeguarding assets, maintaining data integrity, and operating effectively to achieve the organization's goals or objectives.

Assignment Instructions
Your presentation must meet the following requirements:

- Include an introduction slide with the title of the presentation, your name, the submission date, and a reference slide.
- Create 14-18 or more slides of easy-to-understand content (text and visuals).
- Provide speaker's notes containing 50-100 words per slide to elaborate on the slide.
- In your notes, support slide content with at least 2-5 peer-reviewed, scholarly references. The CSU Global Library is a great place to find resources.
- Use these tips for creating presentations: Creating A Visual Presentation.
- Avoid distracting transition elements and animations.

Mastery Exercise (10 points)

COURSE POLICIES

Grading Scale	
A	95.0 – 100
A-	90.0 – 94.9
B+	86.7 – 89.9
B	83.3 – 86.6
B-	80.0 – 83.2
C+	75.0 – 79.9
C	70.0 – 74.9
D	60.0 – 69.9
F	59.9 or below

Course Grading

20% Discussion Participation
8%   Mastery Exercises
36% Critical Thinking Assignments
18% Final Exam
18% Final Portfolio Project

IN-CLASSROOM POLICIES

For information on late work and incomplete grade policies, please refer to our **In-Classroom Student Policies and Guidelines** or the Academic Catalog for comprehensive documentation of CSU Global institutional policies.

Academic Integrity
Students must assume responsibility for maintaining honesty in all work submitted for credit and in any other work designated by the instructor of the course. Academic dishonesty includes cheating, fabrication, facilitating academic dishonesty, plagiarism, reusing /re-purposing your own work (see *CSU Global Guide to Writing and APA Requirements* for percentage of repurposed work that can be used in an assignment), unauthorized possession of academic materials, and unauthorized collaboration. The CSU Global Library provides information on how students can avoid plagiarism by understanding what it is and how to use the Library and Internet resources.

Citing Sources with APA Style
All students are expected to follow the *CSU Global Guide to Writing and APA Requirements* when citing in APA (based on the APA Style Manual, 6th edition) for all assignments. For details on CSU Global APA style, please review the APA resources within the CSU Global Library under the "APA Guide & Resources" link. A link to this document should also be provided within most assignment descriptions in your course.

Disability Services Statement
CSU–Global is committed to providing reasonable accommodations for all persons with disabilities. Any student with a documented disability requesting academic accommodations should contact the Disability Resource Coordinator at 720-279-0650 and/or email ada@CSUGlobal.edu for additional information to coordinate reasonable accommodations for students with documented disabilities.

Netiquette
Respect the diversity of opinions among the instructor and classmates and engage with them in a courteous, respectful, and professional manner. All posts and classroom communication must be conducted in accordance with the student code of conduct. Think before you push the Send button. Did you say just what you meant? How will the person on the other end read the words?

Maintain an environment free of harassment, stalking, threats, abuse, insults or humiliation toward the instructor and classmates. This includes, but is not limited to, demeaning written or oral comments of an ethnic, religious, age, disability, sexist (or sexual orientation), or racist nature; and the unwanted sexual advances or intimidations by email, or on discussion boards and other postings within or connected to the online classroom. If you have concerns about something that has been said, please let your instructor know.