

MIS 5902 – IT Capstone – Syllabus

The whole purpose of education is to turn mirrors into windows (of opportunities).

- Sidney T. Harris

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|------------------------------------|---|----------------|-----|-----------------|-----------|-------------|----------------------------|
| Instructor Information | Thu Nguyen Thu.nguyen@wellsfargo.com or Professorthu@Temple.edu | | | | | | |
| Office Information | (215) 833-8400 | | | | | | |
| Office Hrs. How to reach me | By appointment on-line or on campus any day. By appointment before or after class on scheduled class day | | | | | | |
| CRN | 3926 | Section | 012 | Location | Alter 231 | Time | Weekdays 5:30 PM – 8:00 PM |

Required Course Material:

CISA Review Manual 2019 (\$105.00)

2019 CISA Practice Question Database online (\$299.00/12 months) manual (\$129)

These materials can be purchase from ISACA (<https://www.isaca.org/bookstore/Pages/CISA-Exam-Resources.aspx>)

2018 CISA Dbase <https://www.isaca.org/MyISACA/Pages/default.aspx>

Log on- Mbr369497 - 2018Cisa

Community site: <https://community.mis.temple.edu/mis5902sec011s17/class-1-4222017/>

Course Objectives

In this course you will learn how to prepare for the Certified Information Systems Auditor (CISA) exam, perform research, give presentation and write an executive reports on topics related to current emerging IT risks and controls.

Key topics of the course are:

1. To prepare for national CISA examinations by reviewing key points in areas of:
 - a. IT Auditing Process,
 - b. Governance & Management of IT
 - c. Information System Acquisition, Development and Implementation
 - d. Information System Operations, Maintenance and Support
 - e. Protection of Information Asset
2. Present in-depth knowledge of selected Emerging IT risks and controls topics through field research, presentation and an executive report. A grading rubric for written work can be found on the class Blackboard site.

Grading

| Item | Percent of Total Points |
|------------------------------|-------------------------|
| Participation | 20% |
| Practice CISA Quizzes & Exam | 50% |
| Research | 20% |
| Presentation | 10% |
| Total | 100% |

Participation

Much of your learning will occur as you prepare for and participate in discussions about the course material. The assignments, cases, and readings have been carefully chosen to bring the real world into class discussion while also illustrating fundamental concepts.

- 1) **Preparation before class** – By the start of all classes you will have completed the assigned readings and practice exam and bring a copy for your score of the practice exam and listing of questions that was not answered correctly. Be prepared to discuss topics for which you did NOT get correct on the practice exam. Items to discuss:
 - a. Two key points you took from each practice exam or assigned readings.
 - b. Minimum two questions that you would ask your fellow classmates to facilitate discussion on the topics or questions you did not answer correctly on the practice exam.

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- 2) **Participation during class** – We will typically start each discussion with “opening” questions about the practice exam and a round table discussion of the assigned Article readings for the week. I may ask for volunteers, or I may call on you. Students called on to answer should be able to summarize the key points, and challenges in the area of examination or topic under discussion. 20% of the course grade is earned by discussing the topics brought fourth in class. Evaluation is based on a consistently demonstrating your engagement with the material. Assessment is based on what you contribute, not simply what you know.
- 3) **On-line class** - With advance notice, some classes will be held via on-line learning. You’ll be connected via the WebX link which will be sent to your email the day before the scheduled class meeting. You’ll need a PC with internet connection, webcam not required.
- 4) **Attendance** – you are expected to attend every scheduled class. More than two absences will result in a lowering of a full alphabetical grade (regardless of earned grade). More than four absences will result in a "FAILURE" for the course. Any in class assignment, quiz, commentary, or homework submission that is missed due to late arrival to class or absence will not be accepted and will receive a grade of zero. No make-ups will be allowed. You are expected to be on time, and remain until the end. Continual lateness, surfing on other websites during class or early exit from class can be counted as an absence.
- 5) **Team presentations for Class Materials**– Individuals are paired into teams to prepare and present study materials for assigned classes. Presentation must be prepared in Prezi format using materials from the ISACA CISA study manual.

The criteria for participation includes attendance, punctuality, level of preparation, professionalism, answering questions, discussing readings, discussing incorrect practice questions, contributing to group activities, and contributing to a positive learning environment. Recognizing that students sometimes have unavoidable conflicts, the baseline for expected participation is assessed on one less week than the number of assigned weekly write-ups.

Research Analyses, Presentation and Executive Report

Learning Objectives:

- To related the IT risks and controls framework you’ve learned to real life cybersecurity breaches when adequate controls are not implemented to protect companies.
- To take the lessons learned from the research to apply to your current or future jobs.
- To learn how to deliver presentations to corporate Executives

Students will paired up in groups to perform in-depth research analysis of current **Emerging Technology and associated risks and determine the controls that organizations should put in place to mitigate risks exposures**. Present the results of their research during weeks noted in the “Schedule Summary” below and turn in an executive report of the research analysis. Students will submit a proposal for the topics during week two of the semester and provide periodic updates to their research analysis every 3 week subsequent. Final presentation will comprise of a PowerPoint presentation and an executive report not to exceed 4 pages following the format outlined below. The research analysis, presentation and executive report will be graded using the criteria and guideline noted in the class rubric. The research scenario is that the Executives wants to know how what is new in the market, how to embrace with controls to ensure the security and safety of their IT assets. Organization performed due diligence on RISKS, CONTROLS and GOVERNANCE to ensure adequate protection of assets that is in compliant to policy, law & Regulations. Researched topic must be approved by the professor prior to execution.

Research Presentation Format

1. Executive Summary must describe:
 - a. What is the emerging technology?
 - b. Why should organizations use it or NOT?
 - c. How should it be use?
 - d. What are the RISKS?
 - e. What are the CONTROLS?
 - f. What is the impact if it is not use or is used?
 - g. How should it be Deployed, Monitored, Controlled & Governed?

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2. Based on what you've learned about Information Security, what are your Conclusions and Recommendations to the company regarding the new emerging technology?
3. Be creative in the presentation and use whatever is necessary (preso, video, demo, simulate, etc) to sale your point and convince Management to do what you recommend.

| Master in IT Auditing and Cyber-Security Research Rubric | | | |
|---|---|---|---|
| Trait | Unsatisfactory | Satisfactory | Excellent |
| Determines Information Needed to Understand IT Emerging Technology & Associated Risks, Controls, Governance requirements and Recommendations | Discerns some of the information needed to understand technology and control needs but there are several omissions. | Mostly discerns the information needed to understand technology and control needs with a few minor omissions. | Completely discerns the information needed to understand technology and control needs. |
| Gathers Information and Evaluate Information | Gathers information from a limited range of sources; rely too much on one kind of source or on general web searches and uses too many that are poor or tangential. | Gathers good information from a variety of sources, including subscription databases. Does a good job evaluating the quality, credibility, and usefulness of sources. | Gathers optimal information from a variety of quality electronic and print sources, including subscription databases. Evaluates and selects only the best sources for credibility, usefulness, and quality. |
| Uses Information | Conclusions could have been better supported. Question or problem minimally resolved. Some necessary ideas/points are missing. | Uses information to draw appropriate conclusions, answer a question, or solve a problem. Some minor ideas/points are missing. | Uses information effectively to draw appropriate conclusions, and optimally answer a question or solve a problem. All relevant ideas/points included. |
| Presentation and Content | Presentation is confusing and disorganized, disconnected or choppy; takes effort for audience to follow, too little information for listener to gain meaningful insights or relevance to the topic. | Presentation flows smoothly with occasional confusion or rough patches between ideas. Information presented generally touch on the relevancy of the topic. | Presentation is smooth, polished and well organized; follows the subject well and is relevant to the topic using detailed and current examples. |

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Quizzes

Every week, we will have a short quiz using CISA practice examination questions. You are required to submit the results of your 50 Q&A practice test from the ISACA CISA Q&A databases. You will be able to miss (or drop) one quiz during the semester. Any additional misses will receive a grade of 0. Your average score over the semester will be your grade.

Mid-Term Exam

The mid-term will be the 150 multiple-choice CISA practice examination questions to covers topics we've learned.

Final Exam

The final exam will be the 150 multiple-choice CISA practice examination questions. The exam will be comprehensive. Everything we cover during the semester could appear on the Exam.

CLASS AGENDA

| Class | Topic | Sub-topic | Readings | Assignments |
|---|--|---------------------------------------|---|---|
| Course Introduction and Strategic Plans | | | | |
| 1 & 2 | Chapter 1 Process of Auditing Information Systems | Part A: Planning | CISA Review Manual Section 1.0 – 1.5 <ul style="list-style-type: none"> • IS Audit Standards, Guideline & Code of Ethics • Business Processes • Types of Controls • Risks-based Auditing | Complete 50 questions from the Database |
| | | Part B: Execution | CISA Review Manual Section 1.6 – 1.11 <ul style="list-style-type: none"> • Audit Project Management • Sampling Methodology • Audit Evidence Collection Techniques • Data Analytics • Reporting & Communication techniques • Quality Assurance & Improvements of Audit Process | Complete 50 questions from the Database |
| 3 & 4 & 5 | Chapter 5 Protection of Information Assets | Part A: Info Asset Security & Control | CISA Review Manual Section 5.0 - 5.11.3 <ul style="list-style-type: none"> • Info Asset Security Frameworks, Standards & Guidelines • Privacy Principles • Physical Access & Environmental Controls • Identity & Access Management • Network & Endpoint Security • Data Classification • Data Encryption & Encryption related Techniques • Public Key Infrastructure • Web-based Communication • Virtualized Environment • Mobile, Wireless & Internet of things Devices | Complete 50 questions from the Database |
| | | Part B: Security Event Mgmt | CISA Review Manual Section 5.12- 5.17 <ul style="list-style-type: none"> • Security Awareness Training & Program • Info Sys Attack Methods & Techniques • Security Testing Tools & Techniques • Security Monitoring Tools and Techniques • Incident Respond Management • Evidence Collection & Forensics | Complete 50 questions from the Database |
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| 6 & 7 | Chapter 4 Info Sys Operations, Maintenance & Support | Part A: Info Sys Operations | CISA Review Manual Section 4.1-4.11 <ul style="list-style-type: none"> • Common Technology Components • IT Asset Management • Job Scheduling Y production Process Automation • System Interfaces • End User Computing • System Performance Management • Problem & Incident Management • Change Configuration, Release & Patch Mgmt • Service Level Mgmt • Database Management | Complete 150 Questions Comprehensive Practice Exam |
|---|---|--|---|---|
| | | Part: B Business Resiliency | CISA Review Manual Section 4.12 -4.16 <ul style="list-style-type: none"> • Business Impact Analysis • System Resiliency • Data Backup, Storage & Restoration • Business Continuity Plan • Disaster Recovery Plan | Complete 50 questions from the Database |
| 8 & 9 | Chapter 3 Info Sys Acquisition, Development & Implementation | Part A: Info Sys Acquisition, Development & Implementation | CISA Review Manual Section 3.1-3.4 <ul style="list-style-type: none"> • Benefit Realization • Project Management Structure • Project Management Practice • Business Application Development • Business Application Systems | Complete 50 questions from the Database |
| | | Part B: Info Sys Implementation | CISA Review Manual Section 3.5-3.8 <ul style="list-style-type: none"> • Testing Methodologies • System Migration, Infrastructure Deployment & Data Conversion • Post Implementation Review | Complete 50 questions from the Database |
| 10 & 11 | Chapter 2 Governance & Management of IT | Part A: IT Governance | CISA Review Manual Section 2.1-2.8 <ul style="list-style-type: none"> • IT Governance & IT Strategy • IT related Frameworks • IT Standards, Policies & Procedures • Organization Structure • Enterprise Architecture • Enterprise Risk Management • Maturity Model • Law, Regulations & Industry Standards Affecting the Org. | Complete 50 questions from the Database |
| | | Part B: IT Management | CISA Review Manual Section 2.9-2.12 <ul style="list-style-type: none"> • IT Resource Mgmt • IT Service Provider Acquisition & Mgmt • IT Performance Monitoring & Reporting • Quality Assurance & Quality Management of IT | Complete 150 Questions Comprehensive Practice Exam |
| 12 | Research Presentation & 1-2 page Executive Summary Report Due- Group Presentation | | | |
| Take Scheduled Exam Following the last week of class | | | | |
| Class | Topic | Sub-topic | Readings | Assignments |
| 2 | Governance and Management of IT | Governance of Enterprise IT | The Logical Reason for Consideration of IT, by Tommie W. Singleton, Ph.D., CISA, CGEIT, CITP, CPA | |

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| | | Risk Management | IT Risks: Present and Future, by Tommie W. Singleton, Ph.D., CISA, CGEIT, CITP, CMA, CPA | |
| 4 | Protection of Information Assets | Information Security Management | Risk to Entities Regarding Data Breaches, by Tommie W. Singleton, CISA, CGEIT, CPA | |
| | | Logical Access | Evaluating Access Controls Over Data, by Tommie W. Singleton, Ph.D., CISA, CGEIT, CITP, CPA | |
| 6 | Information Systems Operations, Maintenance and Service Management | Disaster Recovery Planning | What Every IT Auditor Should Know About Backup and Recovery, by Tommie W. Singleton, Ph.D., CISA, CGEIT, CITP, CPA | |
| 8 | Information Systems Acquisition, Development and Implementation | Auditing Application Controls | Auditing Applications, Part 1, by Tommie W. Singleton, Ph.D., CISA, CGEIT, CITP, CPA Auditing Applications, Part 2, by Tommie W. Singleton, Ph.D., CISA, CGEIT, CITP, CPA | |
| 10 | Governance and Management of IT | Risk Management | IT Risks: Present and Future, by Tommie W. Singleton, Ph.D., CISA, CGEIT, CITP, CMA, CPA | |
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CISA EXAM Information:

Exam transitioned to Computer-Based Testing (CBT) in 2017 for ISACA’s CISA, CRISC, CISM and CGEIT certifications. Registration is open for the first exam testing window, which will be 1 May-30 June. Exam registration is available at www.isaca.org/examreg. Exams will be offered in 2017 at PSI testing locations worldwide during three, eight-week testing windows. The second testing window will be 1 August-30 September, and the third window will be 1 November-31 December. Additional information can be found in the [ISACA Exam Candidate Information Guide](#). Updated FAQs to address exam inquiries can be found [here](#). Candidates will receive a preliminary score report at the conclusion of their exam, and official scores will be sent to candidates via email within 10 working days of the exam.

CISA Study Guide

<http://cisaexamstudy.com/cisa-domain-1-testing-concepts/>

Class Schedule Summary

Schedule noted below are subject to change. Changes to schedule dates will be communicated to the students via in class announcements and/or email communication

May18, 2018- ISACA registration deadlines for June exam

| Class | Day | Text Ref | Time |
|--------------|------------|-------------------|--|
| 1 | Mon | Intro & Chapter 1 | 5:30 pm - 8:00 pm |
| 2 | Mon | Chapter 1 | 5:30 pm - 8:00 pm |
| 3 | Mon | Chapter 5 | 5:30 pm - 8:00 pm |
| 4 | Mon | Chapter 5 | 5:30 pm - 8:00 pm |
| 5 | Mon | Chapter 5 | 5:30 pm - 8:00 pm |
| 6 | Mon | Chapter 4 | 5:30 pm - 8:00 pm EXAM 1 due |
| 7 | Mon | Chapters 4 | 5:30 pm - 8:00 pm |

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| 8 | Mon | Chapter 3 | 5:30 pm - 8:00 pm |
| 9 | Mon | Chapter 3 | 5:30 pm - 8:00 pm |
| 10 | Mon | Chapter 2 | 5:30 pm - 8:00 pm |
| 11 | Mon | Chapter 2 | 5:30 pm - 8:00 pm <i>EXAM 2 due</i> |
| 12 | Mon | Group Research Presentation | 5:30 pm - 8:00 pm |
| | | <i>CISA National EXAM</i> | |
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Grading Criteria

The following are the criteria used for evaluating assignments. You can roughly translate a letter grade as the midpoint in the scale (for example, an A- equates to a 91.5). Grades will include cumulative scores from the practice exams.

| Criteria | Grade |
|---|-----------|
| The assignment consistently exceeds expectations. It demonstrates originality of thought and creativity throughout. Beyond completing all of the required elements, new concepts and ideas are detailed that transcend general discussions along similar topic areas. There are few mechanical, grammatical, or organization issues that detract from the ideas. | A- or A |
| Assignment consistently meets expectations. It contains all the information prescribed for the assignment and demonstrates a command of the subject matter. There is sufficient detail to cover the assignment completely but not too much as to be distracting. There may be some procedural issues, such as format or organizational challenges, but these do not significantly detract from the intended assignment goals. | B-, B, B+ |
| Assignment fails to consistently meet expectations. That is, the assignment is complete but has problems that detract from the intended goals. These issues may be relating to content detail, grammatical, or be a general lack of clarity. Other problems might include not fully following assignment directions. | C-, C, C+ |
| Assignment constantly fails to meet expectations. It is incomplete or in some other way consistently fails to demonstrate a firm grasp of the assigned material. | Below C- |

Additional Information

| | |
|-----------------------------------|---|
| Availability of Instructor | <ul style="list-style-type: none"> ○ Please free to schedule (with appointment) time to discuss any issues related to this class. ○ While every student is encouraged to meet with me when they need help understanding the course material. However, meeting is NOT intended for helping students catch up on material they missed because they were absent. Student should work with their classmates to catch-up on missed classes. |
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| Attendance Policy | <ul style="list-style-type: none"> ○ Class discussion is intended to be an integral part of the course. Accordingly, full attendance is expected by every member of the class. ○ If you are absent from class, speak with your classmates to catch up on what you have missed and continue to follow and complete the assignments on the syllabus. |
| Class Etiquette | <ul style="list-style-type: none"> ○ Please be respectful of the class environment. ○ Class starts promptly at the start time. Please make EVERY effort to be on time, as I will communicate important information in the first few minutes of class. ○ Cell phones must be turned off and put away during class. ○ Refrain from personal discussions during class. Please leave the room if you need to speak to another student for more than a few words. If a student cannot refrain from engaging in private conversation and this becomes a pattern, the students will be asked to leave the classroom to allow the remainder of the students to work. |
| | <ul style="list-style-type: none"> ○ There will be two examinations during the semester. The exams cannot be made up, regardless of the reason for absence. |
| Appropriate use of Technology in the classroom | <ul style="list-style-type: none"> ○ Please turn off cell phones at the start of class. If you have an urgent, personal situation and may be receiving an important phone call during class, please let me know this at the beginning of class, sit near the door, and step out of the classroom if you need to take a call. ○ Please bring your laptop or tablet to class. We want to explore these topics and there is a wealth of materials available online. I do expect that you will use your laptop for our course only while in class. |
| Disability accommodations | <ul style="list-style-type: none"> ○ Temple University is committed to the inclusion of students with disabilities and provides accessible instruction, including accessible technology and instructional materials. The process for requesting access and accommodations for this course is: 1) Advise me of the need for access or accommodations; 2) Contact Disability Resources and Services to request accommodations; 3) DRS will consult with me as needed about essential components of the program; 4) present me with a DRS accommodation letter. |

Plagiarism, Academic Dishonesty and Citation Guidelines

If you use text, figures, and data in reports that was created by others you must identify the source and clearly differentiate your work from the material that you are referencing. If you fail to do so you are plagiarizing. There are many different acceptable formats that you can use to cite the work of others (see some of the resources below). The formats are not as important as the intent. You must clearly show the reader what is your work and what is a reference to somebody else's work.

Plagiarism is a serious offence and could lead to reduced or failing grades and/or expulsion from the university. The Temple University Student Code of Conduct specifically prohibits plagiarism (see <http://www.temple.edu/assistance/udc/coc.htm>).

The following excerpt defines plagiarism:

Plagiarism is the unacknowledged use of another person's labor, ideas, words, or assistance. Normally, all work done for courses — papers, examinations, homework exercises, laboratory reports, oral presentations — is expected to be the individual effort of the student presenting the work. There are many forms of plagiarism: repeating another person's sentence as your own, adopting a particularly apt phrase as your own, paraphrasing someone else's argument as your own, or even presenting someone else's line of thinking in the development of a thesis as though it were your own. All these forms of plagiarism are prohibited both by the traditional principles of academic honesty and by the regulations of Temple

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University. Our education and our research encourage us to explore and use the ideas of others, and as writers we will frequently want to use the ideas and even the words of others. It is perfectly acceptable to do so; but we must never submit someone else's work as if it were our own, rather we must give appropriate credit to the originator.

Source: Temple University Graduate Bulletin, 2000-2001. University Regulations, Other Policies, Academic Honesty. Available online at: <http://www.temple.edu/gradbulletin/>

- For a more detailed description of plagiarism:
 - Princeton University Writing Center on Plagiarism:
http://web.princeton.edu/sites/writing/Writing_Center/WCWritingRes.htm
- How to successfully quote and reference material:
 - University of Wisconsin Writers Handbook
<http://www.wisc.edu/writing/Handbook/QuotingSources.html>
- How to cite electronic sources:
 - Electronic Reference Formats Recommended by the American Psychological Association
<http://www.apastyle.org/electmedia.html>