**MIS 5205 IT Service Delivery and Support Syllabus Spring 2014**

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**Regular Office Hour:** Wed. 5:30pm – 8:00pm **Location**: Alter Hall 0A745

**On Demand Office Hours:** via email and phone for appointment

**Course Description**

MIS5205 IT Service Delivery and Support is to teach students to understand IT service delivery and support function from operation aspect, such as helpdesk, change management, service level agreement monitoring, problem and incident management and disaster recovery plan, etc. Students will learn how to evaluate IT operations from control assurance point of view following COBIT framework. The course is designed to teach students the technical infrastructure of large institutions and how this infrastructure provides a reliable and secure platform for business applications and end users. The course will build a foundation for students to understand the service center management and how IT operation teams are utilized to deliver value to the organization. Most importantly, student will learn how to identify key risks within various IT operation functions and how to evaluate controls mitigating the risks. The course will be taught via lectures, reading assignments, individual and group projects.

**Course Objects**

The primary objects for this course are (a) understand IT service delivery and support functions with an organization and (b) learn how to audit the IT operation function. Key topics include:

1. IT Operation Functions Overview
2. Hardware Inventory and Software Licensing Management
3. Service Level Management
4. Data Center Operations
5. Application Control
6. Capacity Management and Performance Monitoring
7. Change Management
8. Problem and Incident Management
9. Data Integrity and Data Security
10. Data Backup, Restoration and Disaster Recovery

*\*\*\* How to evaluate the design of the controls and how to test the operating effectiveness of the controls will be incorporated in each week’s studying.*

**Required Text Book and Materials**

* *ISACA: Certified Information Systems Auditor, CISA Review Manual 2013, ISBN: 978-1-60420-200-7*
* IT Auditing: Using Controls to Protect Information Assets, Second Edition

*ISBN-978-007174238 2 Chris Davis*

Additional course related materials, articles and case studies:

* *Effective IT Management: To ITIL and Beyond, ISBN: 978-3-642-09226-8 Rob Addy*
* *ISACA Journal Articles*
* *Harvard Business Publishing Case Studies*
* *FFIEC IT Examination Handbooks*
* *Gartner Research Papers*
* *Global Technology Auditing Guide (GTAG)*

*\*Details about the reading assignment will be provided in the class.*

**MIS Community Site and Announcements**

Class materials (notes, presentations, projects, in-class exercises and examples) will be uploaded to the MIS Community Site. The URL for the course is:

<http://community.mis.temple.edu/mis5205>spring2014

You are responsible for checking the site daily for updates and announcements. You should check the announcements area several times a week.

**Grading**

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| --- | --- |
| **Item** | **% of Total Points** |
| Class Participation | 15% |
| Team Project/Case Study | 35% |
| Quizzes | 15% |
| Individual assignment/Term Paper | 10% |
| Final Exam | 25% |
| Total | 100% |

**Class Participation**

Student is expected to attend all classes for this course. It will be the students’ responsibility to catch up in case he or she misses a class. To make up the missed class, students should reach out to classmates, check the class blog, find out the homework and team project, etc.

Soft skill sets such as written and oral communication skill is imperative to auditors. Therefore, students are strongly encouraged to participate the classroom discussion and to post thoughts and comments on the class blog for related topics each week.

Reading materials, projects and assignments are selected by instructors to bring the real world IT audit scenario into the classroom to facilitate the instruction and illustrate the core concepts.

**Fifteen** percent of the course grade is allocated to the participation. Students will be evaluated based on class attendance, level of preparation, understanding of the core concepts, case study preparation, professionalism and team work. To be specific, students are expected to (a) preview the class materials before the class, familiar with the topics that will be discussed during the class every week. (b) participate the class discussion; demonstrate the understanding of the material and key concepts; show respect by paying attention while other students presents their work (c) use the class blog to post your thoughts and comments regarding the assignments and reading material between the class. You are also required to comments on other students’ blog entries.

**Classroom Ground Rules:**

* Arrive on time and stay till the end of the class
* No cell phone calls and texting in the class room
* Respect your classmates using common sense
* Preview the reading assignment before attending the class
* Bring in questions and make contribution to your team

**Quizzes**

To facilitate the CISA examination review, students will take a short quiz using CISA examination preparation questions on weekly basis except for a few weeks during the semester. Students are allowed to miss or drop one quiz during the semester. Additional missed quiz will receive a grade of zero. The average quiz score over the semester will be the grade for quizzes and weighted **Fifteen** percent of the total grade.

**Individual Project Reports / Term Paper**

Specifics related to individual project reports and case studies will be provided in the class. **Ten** percent of the grade will be allocated to the individual projects and case studies.

**Group Project Reports and Presentation**

Students will form groups to conduct a mock IT Operation audit and present the audit report to the Senior Management and the Board. Details of this project will be provided in the class. **Thirty Five** percent of the grade will be allocated to the group or team project and its presentation.

**Final Exam**

The final exam will use all multiple-choice CISA practice examination questions. The exam will be comprehensive and cover everything during the semester. **Twenty Five** percent of the grade will be allocated to the final exam. Missed finals are in principle not allowed to have make-ups.

**Evaluation and Grading**

The class grading is based on the following criteria:

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| --- | --- |
| **Grading** | **Criteria** |
| **A or A-** | 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 organizational issues that detract from the presented ideas. |
| **B+, B & B-** | The 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 subject completely but not too much as to be distracting. There may be some procedural issues, such as grammar or organizational challenges, but these do not significantly detract from the intended assignment goals. |
| **C+, C & C-** | The assignment fails to consistently meet expectations. That is, the assignment is complete but contains problems that detract from the intended goals. These issues may be relating to content detail, be grammatical, or be a general lack of clarity. Other problems might include not fully following assignment directions. |
| **Below C** | The 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. |

**MIS5202 IT Service Delivery and Support Schedule**

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|  | ISACA Topics | Coverage | Notes/Reading/Assignment |
| Week1  (1/29) | Information System Overview (Part I): Introduce Key IS Infrastructure Components and IS Operation Functions. | * IT Risk and Controls Overview * Control Frameworks and Standards * IT Audit Process Overview * IT Infrastructure Overview * IS Management & Operations | ***CISA Review Manual 2013:*** *4.1; 4.2.1;4.2.3;4.2.4; 4.6.5*  ***IT Auditing:***  *Chapter 1 Building an Effective Internal IT Audit Function*  *Chapter 2 The Audit Process*  *Chapter 16 Framework and Standards* |
| Week2  (1/25) | Information System Overview (Part II): Continue to Introduce Key IS Infrastructure Components and IS Operation Functions. | * Information System Assets * Database and database Administration Practices * General Computer Controls * Database Audit   CISA Quiz #1 | ***CISA Review Manual 2013:*** *4.3.1; 4.4.3; 4.4.4; 4.4.5; 4.6.1, 4.6.3*  ***IT Auditing:***  *Chapter 3 Auditing Entity Level Controls*  *Chapter 9 Auditing Databases*  *Chapter 18 Risk Management*  **Group Assignment # One**  *Develop an audit planning memo for a General Computer Control audit.*  ***Assignment Due Date: 2/19*** |
| Week3  (2/12) | IS Architecture and Operating System Audit | * Quiz #1 Review * Operating Systems Overview * Audit Operating Systems | ***CISA Review Manual 2013:*** *4.4.1; 4.4.2; 4.6.2*  ***IT Auditing:***  *Chapter 6 Auditing Windows Operating Systems;*  *Chapter 7 Auditing Unix and Linux;* |
| Week4  (2/19) | IS Architecture (continuous) and Network Audit | * Network Overview * Network Security and Administration Overview * Audit Network   CISA Quiz #2 | ***CISA Review Manual 2013:*** *4.5.1; 4.5.2;4.5.3;4.5.4; 4.6.4*  ***IT Auditing:***  *Chapter 5 Auditing Routers, Switches and Firewalls*  **Group Assignment # Two:**  *Develop a Risk Control Matrix (RCM) of the operating system/Databases/Network environment you are going to audit*  *Assignment Due Date*: 3*/12* |
| Week5  (2/26) | Hardware and Software Inventory Management and Software Licensing | * Quiz #2 Review * Inventory Management * Software License Management (contract/supporting agreement/license/escrow) * Audit Inventory and Software License * Regulatory Environment and IT Audit | ***CISA Review Manual 2013:*** *4.2.8; 4.3.2; 4.4.8;4.4.9*  ***Additional Reading:***  ***Gartner:***  *Chapter 17 Regulation* |
| Week 7  (3/5) Spring Break – No Class | N/A | N/A | N/A |
| Week6  (3/12) | Service Level Management (Part One): Introduce Service level management components and Service Level Agreement (SLA) monitoring. | * Outsourcing Practice and Vendor Management * Monitoring Outsourcing Practices * Establishing a Measureable Service Level Agreement * SLA Monitoring and Enforcement * Vendor Management and SLA Audit Overview   CISA Quiz #3 | ***CISA Review Manual 2013:*** *4.2.2*  ***Additional Reading:***    **Group Assignment # Three**  *Develop test procedures for an IT entity your team chooses to audit.*  *Assignment Due Date: 3/26* |
| Week 8  (3/19) | Datacenter Operation Review | * Quiz #3 Review * Type of Datacenter Operations (In-house, Turnkey and Outsourced) * Maintenance Schedule for HVAC equipment * Service Visit Tracking * Physical Security * Datacenter Audit Overview | ***CISA Review Manual 2013:*** *4.4.6;4.2.10*  ***IT Auditing:***  *Chapter 4 Auditing Data Center and Disaster Recovery*  ***Additional Reading:***    **Group Assignment #Four:**  *Write three high risk findings from the audit your team conducts*    ***Assignment Due: 4/2*** |
| Week 9  (3/26) | Disaster Recovery (DR), Backup and Restoration:  (case study # 1) | * Back Up and Restoration Mechanism and Applications * Tape and Disk Management Systems * Media Sanitization and Disposal * DR Strategy and Alternatives * DR Plan Development * Measurement of the Adequacy of a DR Plan * DR/Business Continuity Plan Audit Overview   CISA Quiz #4 | ***CISA Review Manual 2013:*** *4.7*  ***Additional Reading:***    ***Case Study HBP:*** *Engro Chemicals PK*  **Group Assignment # Five**  *Engro Chemicals PK case study analysis*  ***Group Presentation Date: 4/2*** |
| Week10  (4/2) | Information System Maintenance and Data Integrity:  (Case Study #2) | * Quiz #4 Review * Security Objectives * Security Process * Governance * Information Security Risk Assessment * Information Security Strategy * Security Controls Implementation * Security Monitoring | ***CISA Review Manual 2013:*** *4.2.9;4.4.7*  ***Additional Reading:*** |
| Week11  (4/9) | Application Control | * Open System Interconnection (OSI) Model * OSI Model Application * System Interface Control * Application Audit Overview   + Flow Chart   + Narrative * Case Study Presentation   CISA Quiz #5 | ***CISA Review Manual 2012:****4.5.5; 4.5.6*  ***IT Auditing:***  *Chapter 8: Auditing Web Servers and Web Applications*  *Chapter 13Auditing Applications* |
| Week 12  (4/16) | Change Management and Release Management  (Case Study #three) | * Quiz #5 Review * Change Management Policies and Procedures * Risks Associated with Change Management * Controls to Detect or to Prevent Unauthorized Changes * Separate Production from Development and Testing * Segregation of Duty * Approval Procedure * Release Management – Notification, Testing and Roll-Out Strategy * Change Management Audit Overview | ***CISA Review Manual 2013:*** *4.2.6; 4.2.7*  ***Effective IT Service Management*** *– Chapter 18 Change Management & Chapter 22 Release Management*  **Additional Reading:**  **Case Study:** *Care Group*  **Group Assignment # Six**  ***Case Study (HBP)***  *Care Group Analysis*  ***Group Presentation Date: 4/23*** |
| Week 13  (4/23) | Availability, Capacity and Incident Management | * Capacity Management * KPI and Measurement * Performance Monitoring Processes and Tools * Problem Recording, Tracking, Escalation and Resolving * Incident Team and Response Procedures   CISA Quiz #6 | ***Effective IT Service Management*** *-* Chapter 23 Availability and Capacity |
| Week 14  (4/30) | End User Computing and Performance Monitoring | * Quiz #6 Review * Help Desk Request Handling * Batch Processing * Scheduling Software and Utilities * Managing scheduled and Non-Scheduled Processes * Operation Center “Run Book” * Job Monitoring * Error Handling and Escalation * End-user Computing/Help Desk Audit Over view | ***CISA Review Manual 2013:*** *4.2.5; 4.4.7; 4.6.6;*  *4.2.4;**4.3.2; 4.3.3; 4.3.4; 4.6.7*  ***IT Auditing:***  *Chapter 10 - Auditing Storage*  **Individual Assignment:**  Term Paper – *Research Paper upon risks and controls associated with emerging technologies* |
| Week 15 (5/7) | Emerging Technology Auditing | * Cloud Computing * Mobile Computing * Vitalization | ***CISA Review Manual 2013:****4.5.6*  ***IT Auditing:***  *Chapter 11: Auditing Virtualized Environment*  *Chapter 12: Auditing WLAN and Mobile Devices*  *Chapter 14: Auditing Cloud Computing and Outsourced Operations* |
| Week16  (5/14) | Final Exam | CISA Simulation Test | N/A |

***\*\*\* CISA Review Manual 2012:*** *4.6 Auditing Infrastructure and Operations will be covered each week’s related IT operation function area.*

**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

Ref. to: 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 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/elecmedia.html